



# Lloyds Bank Review



OCTOBER 1959



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## **LLOYDS BANK LIMITED**

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# Lloyds Bank Review

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*The Bank is not necessarily in agreement with the views expressed in articles appearing in this Review. They are published in order to stimulate free discussion and full inquiry.*

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## The Radcliffe Report

*By Robert V. Roosa*

The Radcliffe Report appeared at just the moment to become a centre-piece in many of the informal conversations among those who had gathered from all over the world in late September to attend the Annual Meetings of the International Bank and the Fund. Certainly no Report, however inspired, could have fully satisfied the variety of hopes and interests represented among all of the finance ministers and their staffs, the central bankers, the university professors, the commercial bankers, the journalists and commentators, the underwriters and brokers, and many others who were there—even after making full allowance for the fact that the Report is, in any event, intended only as a critique of the working of the monetary system in the United Kingdom, not as a tract on monetary policy for the world at large. But the most striking impression, apparently, was that no one seemed genuinely enthusiastic, and so many, of differing orientations and background, seemed disappointed.

What is there about the Report to account for the feeling, not only at these Meetings but quite generally, that the Committee has "let down" world-wide expectations for a major advance in the theory and methodology of central banking? It is of some importance to identify the reasons for this concern, and wherever possible to strip them away, before they so harden and encase the Report that its many unquestioned, solid accomplishments are lost from view outside the United Kingdom.

Quite obviously it is only in this sense—the generalized applicability of the Committee's Report, not its detailed findings for use specifically in Britain—that the present article could be undertaken. Yet because the Report is so fully embedded in the record of British experience, the writer may have to be forgiven

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Mr. Robert V. Roosa is a Vice President of the Federal Reserve Bank of New York. He was the author of the study, published by that Bank in July, 1956, "Federal Reserve Operations in the Money and Government Securities Markets" and contributed to the Oxford Bulletin of Statistics' monetary symposium in 1952.

an occasional impertinent intrusion, particularly where the Committee's conclusions diverge far enough from the implications of the evidence in other countries to seem confusing. It would indeed be of significance everywhere, for example, if it is now possible in Britain almost completely to ignore the money supply, and the related increments of change in the total of outstanding bank credit, as the Radcliffe Committee has done so determinedly while urging instead the broad importance of liquidity. Yet the experience of country after country, from those of state socialism to those where private capitalism predominates, argues that the money supply and the related creation of bank credit need explicit and special attention, even though great stress on liquidity may also be useful. That is why many foreigners are bewildered by this pervasive insistence on liquidity and the virtual exclusion of money—apart from occasional glancing references—in a study of the monetary mechanism. Because this distinction is at the root of so many of the themes in the Report that foreigners have difficulty in understanding, this article will begin there.

A foreigner has questions, too, as to the various positions taken with respect to interest rates. The Committee seems to say that central bank action, exerted through debt management, can so influence interest rates as to contribute materially toward the goals of public economic policy. It elaborates somewhat uncertainly the principal paths along which that influence might work; but then, without disclaiming all this, it also concludes that any greater fluctuation of interest rates than has occurred in recent years would be "probably impracticable and certainly so disadvantageous as to warrant our ruling it out as a general line of policy" (p. 175, para. 490)—leaving an implication that even these swings have been too much. What is there, then, among these apparently contradictory positions, that may advance, or more meaningfully define, the theory and practice of central bank influence upon interest rates, and of these rates in turn upon economic activity?

There are doubts abroad, too, concerning whatever it is that the Committee would want to have done in carrying out the unexceptionable general injunction that . . . "it is the liquidity position as a whole upon which the monetary authorities must act" (p. 107, para. 312). Perhaps, in addition, if the experience of other countries may be any guide, the Committee's thinking about the grand aggregates in the economy as a whole was concentrated too heavily on the level of demand, neglecting the significance of financial factors affecting wages

and other costs or conditions of supply. Even more important, foreigners are surprised to see so little attention given to the behaviour of savings as a whole—the outstanding total, the possible causes of change in the current flow, and the scale of future needs.

These are the kinds of questions which it may be appropriate for an outsider to explore, but not before noting, in advance of the fuller exposition to come later, that overseas observers do not by any means underestimate the enormous contribution made by the Committee in putting together the first comprehensive description of the British financial mechanism in its entirety, as it has now developed since the mid-century. Presumably the three promised volumes of evidence, as well, when they are published, will reinforce these impressions of the immense effort that was absorbed simply in planning, obtaining, and presenting the survey data on the activities of the Treasury, the Bank, the commercial banks, the discount houses, the merchant banks, the savings institutions, and so many others. There is awareness, too, of the judicious balance which the Committee has preserved in its appraisal of the usefulness of the City's various institutions: it offers no proposals for slashing reorganization; it has even rescued the discount houses from their critics. The description of the sterling area and the employment of international reserves is a model of clear exposition. It is to these and other comparable achievements of the Report that the thread of this review will return, after an attempt to untangle some troublesome questions in between.

#### A "MONETARY SYSTEM" WITHOUT A POLICY FOR MONEY

In what is indeed the first substantive comment of its Report, the Committee says . . . "it is the liquidity of the economy, rather than the 'supply of money' that the authorities should seek to affect by their use of monetary measures . . ." (p. 4, para. 10). How different so much of the Report might have been if the Committee had instead followed through an alternative formulation which it seemed at times close to recognizing: "the authorities should *not only* control the supply of money *but also* seek more broadly to affect the liquidity of the economy". For experience outside the United Kingdom indeed suggests that policies for influencing liquidity must start from, and be elaborations upon, a policy with respect to money itself. These are mutually reinforcing, not mutually exclusive, zones for public policy.

Because the Committee apparently decided at an early stage in the preparation of its Report to orient its data, its interpretations, and its conclusions in terms of a broadly inclusive concept of liquidity, it quite understandably drifted into a preoccupation with the stock of financial assets and with the greater or lesser liquidity of the components of that stock. Concerned then to emphasize the significance of changes continually taking place in the composition of this stock—an emphasis which has, to be sure, been gravely neglected far too long—the Committee ignored almost completely the significance of changes in the size of the stock. Such changes result both from changes in the flow of current savings and from changes in the quantity of money. The former may be massive, but usually occur slowly; the latter may be of almost any size, can occur quickly, and are more closely responsive to the actions of the public authorities, more of the time, than any other part of the financial mechanism. That is why, in other countries equally concerned with the broader significance of liquidity, a place is still found for purposive changes in the quantity of money and in the aggregate of created bank credit that is usually linked to it. And in an entirely different context the Committee itself recognizes the same logic—that of controlling changes in the totals, as well as influencing the composition—in its own indictment of the capital issues controls (p. 335, para. 975).

The denial of any special place for money and for the related creation of bank credit in the liquidity system (a denial repeated so often and so combatively as almost to seem to protest too much) is also linked by the Committee to its observation that the Bank itself made no attempt in the conventional way, throughout the post-war period, to control the quantity of money. Thus the Committee finds that the Bank has not consciously and purposefully limited the supply of cash (bank reserves); that instead "the banks have always been automatically provided with whatever was necessary to make their cash ratios fit the 8 per cent. rule" (p. 149, para. 430). As the Committee sees it, bank cash has been a residual, left to bob around willy-nilly as the Bank sought instead to stabilize Treasury bill rates. Could the Committee be fitting an all-or-nothing interpretation to facts that should instead be sorted out among various kinds of situations, and between the long and short run? May it not be partly because the Committee (perhaps mistakenly) thought that there was no point in the exercise of doing sums on the clearing banks' cash position—neither in the short run nor the long—that it ignored the whole apparatus of

multiple deposit expansion which has been found crucial to the understanding and the use of commercial banking systems throughout the world?

One might suspect something amiss in the analysis from the simple fact (see Chart on p. 146) that this stabilizing of the Treasury bill rate did not seem particularly confining: the rate fluctuated over a range from  $\frac{1}{2}$  per cent. to  $6\frac{1}{2}$  per cent. from 1951 through 1959. What did the authorities consider in permitting, or causing, all of the changes that did actually occur? Having some confidence that the London and New York markets are not totally dissimilar, and having had some experience with the carrying out of open-market operations in the latter, the writer is left to wonder whether the Committee may, in looking for the answer, have confused the Bank's attitude toward avoiding erratic short-run gyrations of rates with a supposed intention by the Bank to disregard all consequences for the money supply, as such, in guiding the bill rate over time.

From a distance, it has sometimes seemed as if the determination of monetary policy in the United Kingdom might have come about through a process of successive approximation, as it certainly does in the United States. (At least the hypothetical possibility is sufficiently plausible that one might wish it had been examined by the Committee, whether or not it fairly describes any of the approaches that have been followed in the past.) Perhaps the starting point might be thought of as a particular Bank Rate, with the authorities then relying partly upon various kinds of frictions to limit fleeting or erratic fluctuations in the surrounding constellation of money market rates, and observing the drift in the cash balances of the clearing banks (among other things) as stronger trends tend to push market rates higher or lower while the authorities act to keep rates reasonably stable. If the resulting changes in the clearing banks' cash balances, in their portfolios of earning assets, and thus in the money supply seemed to be seriously out of step with over-all public policy concerning changes in prices and output, a theoretical case could be made for further changes in money market rates, or even long-term rates, or ultimately in the Bank Rate, to help bring these other variables back into line. With any new determination of Bank Rate, the sequence of events might be repeated again.

The comparable procedure in the United States, also in such grossly over-simplified terms as to be no more than a caricature, might be visualized conceptually as proceeding in reverse order: starting with the money supply and ending with

the discount rate, but coming out at about the same place after a similar sequence of interactions among the same kinds of influences. Initially, judgements are centred on the appropriate changes in bank reserves and the money supply for current economic and credit conditions. Then as events develop, while the intended supply of bank reserves is becoming available, appraisals of all the underlying economic developments, and of changes in other forms of liquidity, as well as of changes in market rates of interest, help to determine whether the initial policy objective should be continued. If a new pattern of market rates emerges, as a counterpart of the general pressure or ease in the situation, the discount rate may eventually be raised or lowered to confirm, or give further impetus to, these related developments in money market rates of interest. And then this schematic sequence would begin all over again, as part of a continuous process of evolving equilibrium relationships between the money supply and market rates, with both sides having some part in determining each succeeding equilibrium position.

Perhaps the Committee was not entirely indifferent to such considerations because, even though it did not consider significant any direct use of control over the reserve base, nor over the expansion ratio set by a primary reserve requirement, it did stress that any desired limiting of the commercial banks by the monetary authorities could be accomplished another way. The 30 per cent. liquidity ratio should be set firmly as a minimum, and then the authorities could control the aggregate of bank lending power by altering the supply of Treasury bills available for meeting that requirement (p. 216, para. 583). But what they failed to realize, as the experience of several other countries has shown in the post-war period, is that such a technique will work only if the supply of assets eligible for the liquidity reserve is confined exclusively to holdings of the authorities and the banks, and the total is varied solely for purposes of monetary policy. If liquidity assets may be acquired through purchases from others, however, or if the supply should be increased by necessitous Treasury borrowing, the clearing banks can go on adding to their holdings of liquidity assets, and then in addition can also add all other kinds of assets for the remaining 70 per cent. of the total, through the familiar process of multiple deposit expansion *provided they hold any excess cash reserves* (above the 8 per cent. minimum, which the Committee would intend to keep). This is not to say that there is something wrong with liquidity requirements. They may indeed serve a variety of purposes in a versatile use of central banking controls. But is the

Committee right in assuming that liquidity requirements can completely remove the need for some kind of concern over the primary reserve base, so long as fractional reserve banking facilities do exist, and the money which banks create occupies a special place as the highest form of liquidity—the medium of exchange, the unit of account, and the standard of value?

The Committee had other reasons, too, for rejecting traditional monetary analysis. It expresses concern over the theoretical difficulties of defining the supply of money. Such problems are, of course, recognized everywhere, but they are reasonably well resolved in other countries by keeping several concepts in view all of the time, and using them only as rough guide-lines to assist in forming continuous judgements. The Committee's fears in this respect would not, therefore, seem justified. It then goes further, however, to stress that there is an inescapable haziness in the connection between any concept of the supply of money and the level of total demand because of "the impossibility of limiting the velocity of circulation" (p. 187, para. 523). But is that not exactly what any effective influence upon liquidity must accomplish? Actually, in the United States, where by good fortune much more progress has already been made toward producing the kinds of data the Committee would like to have for liquidity analysis, many students find the concept of liquidity itself distressingly elusive. One of the most effective ways now being found to group these vast arrays of data for illuminating and meaningful analysis is by gauging their implications for the velocity of money.<sup>1</sup>

#### **INTEREST RATES: FLEXIBILITY WITHOUT WIDER FLUCTUATIONS**

Throughout its several masterful sections on interest rates, the Committee is visibly torn between two positions: whether to plump for its own version of liquidity control as a mainstay of public policy, or to condemn the non-fiscal forms of financial policy as alternatively either irritatingly futile or maliciously brutal. Clearly, the negative side of its split personality was dominant in evaluating the great events of autumn 1957, when the British authorities took steps which many outside observers consider the most emphatic demonstration of the power and usefulness of monetary policy and the interest rate weapon since the war. The Committee was apparently unmoved by the drama of this experience, and its results.

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<sup>1</sup> See, for example, the forthcoming monograph by George Garvy, entitled "Deposit Velocity and Its Significance", to be published by the Federal Reserve Bank of New York in November, 1959.

Yet there is a contrasting strain through much of the straightforward exposition. Somebody's pulse quickens over the prospects for flexible rates of interest, and must have found the tug on the bit from the Committee's self-imposed unanimity rule particularly uncomfortable in this part of the Report. Speaking broadly, the Committee finds that interest rates have little direct pull on savings, at least in the short run; deter only some kinds of borrowers; but exert a great influence on the decisions of lenders—all findings that the present writer finds generally congenial, though preferring some modifications in detail.<sup>1</sup>

The Report also argues convincingly that changes in long-term rates are the most powerful. It develops an interesting three-gear analogy relating the effects of changes in interest rates to whether rates recently have been below, around, or above some going conception of a "norm". It recognizes that the existence of a large public debt offers ready opportunities for operations to influence the structure of interest rates; and it is even, rather cavalierly, prepared to turn all of debt management into an instrument for the central bank to use for affecting liquidity through changes in rates. It believes that financial intermediaries will be sufficiently responsive to such influences that no direct controls over them need be considered (unless there should in future be long periods of excessive liquidity that persistently embarrass the authorities—p. 182, para. 511). And yet despite all of that, the Committee from page to page flips over to its other view-point and writes a succession of stinging critical observations on the relative insignificance of these or other monetary actions, and the damage that would be done by any wider fluctuations "than hitherto" in rates.

Perhaps the Committee has done real service, however, by displaying (without successfully resolving) this inner conflict, for such contradictions will probably always exist. It may only have found another, more effective, way of saying that monetary policy cannot be relied upon to carry the main burden of public policy for limiting cyclical swings of business and for encouraging continued growth. The same point has often been made by the monetary authorities in Britain, as well as the United States and elsewhere, and is made explicitly by the Committee (p. 183, para. 514). Its import should not be to condemn monetary controls to the scrap heap, but should instead be to assure that the monetary authorities themselves, more

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<sup>1</sup> See "Interest Rates and the Central Bank", in *Money, Trade and Economic Growth (in Honor of John Henry Williams)*, Macmillan, New York 1951, pp. 270-295.

likely to be conscious of their limitations than anyone else, have sufficient status and authority within the structure of government to press and negotiate for those related, and often more important, measures that can make it unnecessary to stretch reliance upon monetary controls to an extreme. In this light, it is perhaps regrettable that the Committee, for all its concern to keep monetary control "in its place", devotes only two paragraphs (516 and 517) to the use of fiscal weapons as such (though fiscal measures are incidentally referred to in paras. 49, 400 and 535).

Whatever the scope allowed for reliance upon flexible interest rates, some of the Committee's more specific suggestions may need further consideration. It is unable to understand, for example, why securities can be sold most readily when their prices are rising, while sale often proves impossible in a declining market. And in its regrettably characteristic manner of treating issues of concept or theory in all-or-nothing terms, the Committee virtually rules out such behaviour as a violation of the laws of supply and demand.

Here, as in instances mentioned earlier, the Committee has failed to distinguish among stages in a process. For if the behaviour of the London market corresponds to New York as closely as the writer would suspect, then it can be said flatly that both points of view are right. At any given moment, for the period just ahead, the prospects of selling any issue are almost always much improved if its price, and the prices of issues surrounding it in the market, should be rising. But when the supply catches up with demand and prices move sideways or begin to sag, actual sales volume will ordinarily also sag. Sooner or later the point may be reached at which, in order to improve the chances of successful sale, underwriters place a new issue at a price considerably below the previous level. If from that initial price the sales people find enough demand to begin marking up the price by a few thirty-seconds, the issue will almost certainly be a success. Other new issues (or offerings of old issues) will come along at prices which (with appropriate spreads for differences in quality) test out the new zone—perhaps starting just a little higher in price, until the market again steadies and moves sideways or begins to slide. And, with infinite variations, this is the process that market traders know and accept, in New York at least, as part of the normal way of life.

If the Committee had recognized the significance of these continuous stages in financial markets, as life moves in effect

from one plateau to another, with one description fitting life on any given plateau and the Committee's description fitting the jumps from one to another, it might not have concluded that there has been so little influence by the authorities either upon short rates or upon long in recent years. The Committee then might also have had more sufferance for the way in which expectations work out, both as the inexorable flow of current funds is invested by the great intermediaries while the market rides along one gently sloping plateau, and as the whole market adjusts from one of these inclined planes to another, some distance above or below the last one. And if the Committee had then followed its own hunch, that people have often underrated the influence that the actions of the authorities themselves have on the market expectations that cause shifts in rate levels (p. 208, para. 563), the basis might have been laid for a theory of interest rates that could fulfil the Committee's broader aims much more readily.

One more qualification would, however, be needed. For in its laudable desire to widen information—both with respect to statistics and to policy—the Committee concludes that the authorities should not only be working toward definite objectives with respect to long rates, but "should give expression to these intentions of policy" (p. 178, para. 499). That, at least in New York, would seem to this writer most likely to have a polarizing effect. The entire market would simply slide all the way to whatever price seemed implied by the authorities' announcements. And rate movements would tend to become sudden gyrations, timed with public announcements, between high and low extremes. The authorities would be denied the possibility of probing the market, as an aid to reaching their own conclusions; and much of the scope for gentler, marginal influences might be lost.

Instead of the certainty provided by announcements, the essential ingredient for successful open-market operations would seem to be a modicum of uncertainty—not the uncertainty of disorder and wild price gyrations, but the uncertainty inherent in a market that consists mainly of separate borrowers and lenders, continually finding their way toward an equilibrium price, and subject when needed to marginal influence by the authorities. In that kind of framework, and with adequate support from other arms of governmental economic policy, there should be a necessary and real place for flexible interest rates, without danger of ever experiencing fluctuations so great as to disrupt the "intricate and highly developed network of

financial institutions" (p. 175, para. 491). But it would seem essential for the workings of the markets that no attempt ever be made to specify outer limits of acceptability for interest rate fluctuations.

### THE LASTING CONTRIBUTIONS

In a review of this kind, written some time after everyone else has thoroughly studied the document itself, the elaboration of a few criticisms inescapably crowds out a fuller description of the much more numerous remarkable achievements. Even now, there are still a variety of smaller points along the way which at an earlier stage the writer thought he could not leave untouched, not to mention the wider range of issues concerning house-keeping arrangements and the designation of policy responsibilities within the British government and the Bank which have also aroused much comment, but which the writer has intentionally excluded here. However, at this comparatively early stage in the history of the Radcliffe Report, it is challenging and tempting to try to sort out those particular contributions which seem most likely to have a lasting impact in America, and perhaps elsewhere in the world.

The full description of the entire British financial mechanism, together with the volumes of evidence still to follow, will be of tremendous importance in encouraging informed study of British monetary developments and thereby enriching the common body of monetary analysis available in our common language. Most American students can now know for the first time what significance there is in the distinction between the Issue and the Banking Departments; how the discount market really functions, including its financing; what the current scope and importance of the acceptance houses and other merchant banks are; what the issuing houses do in screening, spacing and then assuring the issues of new securities; how much of the various kinds of securities markets are accounted for now by each of the various types of savings institutions; what the Exchange Equalization Account does and how it is run; why Ways and Means Advances are used; and scores of other essentials. Moreover, the fact that, after all these years of little publicity, a full-scale review finds no reason for any material change in the whole panoply of institutional practices in the City itself conveys a gratifying assurance as to the inherent soundness of arrangements that have emerged in response to market forces.

Growing out of this description, too, is the clear-cut recognition, so important for the United States as well, that there is an over-all unity in the market because lenders have a choice among competing borrowers, and borrowers may choose among different kinds of lenders. There are a great variety of lessons to be learned from the Committee's findings that "pressure in one part of the market soon makes itself felt in other parts" (p. 107, para. 315) and that in these conditions "a marginal adjustment in the pressure of demand may be all that is required" (p. 167, para. 471). It is instructive also to know that in Britain, as in the United States, the application of generalized pressures at the margins may tend to have a stronger impact upon small business, and upon fast growing business, in contrast with other borrowers, so that particular attention should be given to the financing needs of these kinds of business when restrictive policies become severe.

So far as the techniques of central banking are concerned, the Report clearly has added much to the growing emphasis upon open market operations as the centre and core of monetary and credit control. It has added the force of its endorsement, though not without qualifications, to the impact effect in the British environment of "package deals". It has certainly underlined the essential need for mutual recognition of the interactions among fiscal policy, debt management, and the tasks of central banking. Had it been willing to concede a special place to the money supply as such, it might indeed have done more toward articulation of some of the unique aspects of central banking, but its underlying stress upon reference to a common governmental economic policy will probably stand long after its aberration on the money supply has been forgotten.

Moreover, though the Committee confesses some inability to understand the paths of its influence, Bank Rate has emerged untouched as an essential ingredient of purposive financial policy. On the foreign side, the Report has strengthened the case of those, the writer included, who have felt the need for a resounding pronouncement in favour of fixed exchange parities, as opposed to floating rates. It has raised an effective warning against reliance upon various kinds of selective controls "for operating on the general economic situation" (p. 183, para. 513), while also giving encouragement to those who believe that hire-purchase controls should be reserved, and considered available, in fast-moving situations beyond the prompt reach of more general measures. And, in the climate of comment throughout the world on the risks of sus-

tained inflation, it has come down hard against resort to index bonds or similar devices because, once used, they spread and "very soon constitute a major alteration in the working of our economic system, and inevitably tend to accelerate the inflation" (p. 212, para. 573).

Chapter VIII on "International Aspects of the Monetary System" may well become a classic in precise and clear exposition. Reflecting in part the much fuller literature and wider ranging discussion that has characterized Britain's external (in contrast with domestic) monetary affairs, it presents a concise analysis of the rôle of reserves and of a reserve currency that will long reward study anywhere. Only in its discussion of obligations under the Agreement of the International Monetary Fund, where it gives an incorrectly narrow interpretation of the Fund's range of discretion in administering the celebrated Article VIII (under which discriminatory measures by a country whose currency is convertible become subject to Fund inquiry), does it slip into error (p. 252, para. 690). And as to its long-term endorsement again of the "bancor" idea of an internationally acceptable reserve currency—with the IMF converted into an international central bank—that has had high endorsement before, and will surely deserve the further study which the Committee commands.

But of all these major contributions, perhaps the greatest of all will be two: energizing the much more comprehensive collection and publication of financial data, from all categories of financial (and business) institutions, and directing attention to the compelling need to use such data as a basis for influencing more effectively the liquidity position of the economy as a whole. And if, as that eventuates, those who carry forward the Committee's charge should find themselves grouping their findings in terms of influences upon the money supply, and upon its velocity, the gains in implementing public economic policy may still be just as great as anything which the members of the Committee visualized.

R. V. Roosa.

*New York.  
October 15th, 1959.*

## Equities and Growth

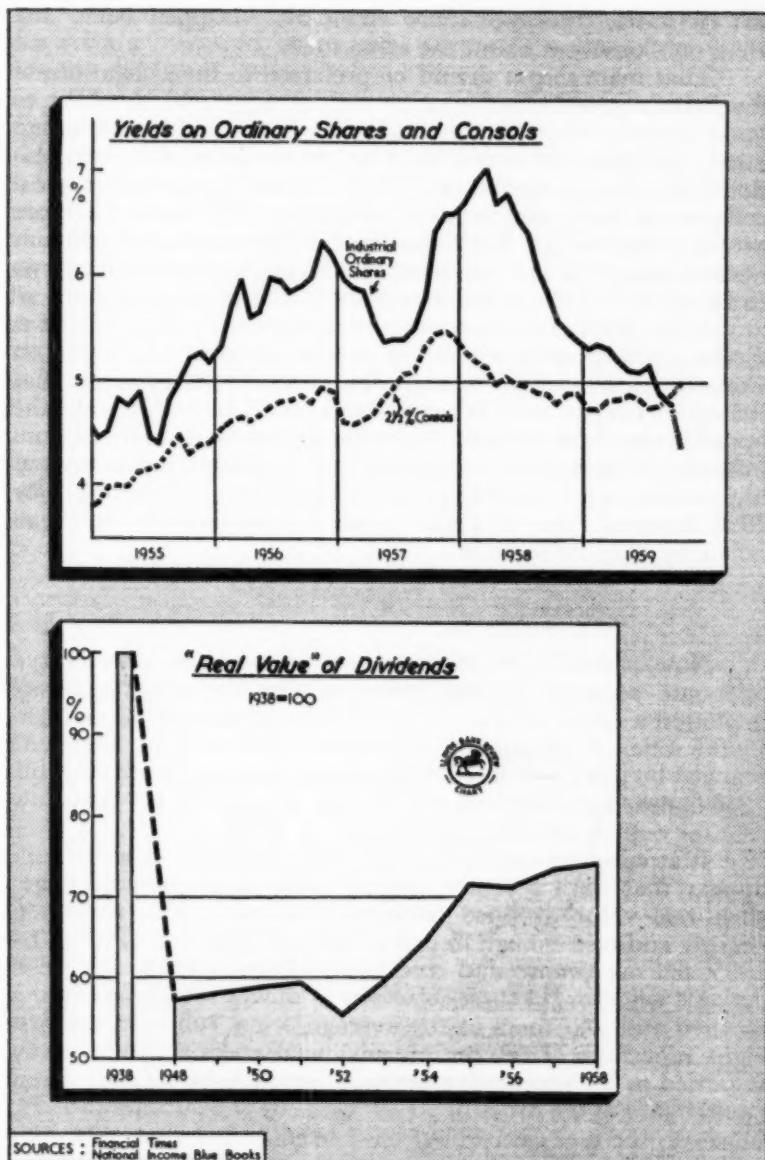
By Thomas Wilson

ONE of the outstanding features of recent financial history has been the growing preference of both private investors and institutions for ordinary shares rather than fixed-interest obligations. In the first part of the article this development will be discussed and the importance of prolonged inflation will be indicated. It cannot be assumed, however, that inflation provides a full explanation of what has occurred for, apart from rising prices, equities may appear to offer the attraction of a share in economic expansion; and the attraction will be all the greater if it is believed that public policy can now avert the serious depressions which in the past have so sharply interrupted the process of growth. Such considerations lead on to a study of what is meant by "growth stocks" in the second part of the article.

### I

On various occasions since the war the yield on ordinary shares, as indicated by the *Financial Times* index, has dropped so low as to be only slightly above the yield on 2½% Consols. The margin was small at mid-1951 and smaller still at mid-1955; the curves drew together once more in 1957. Then in the autumn of 1959, on the eve of a General Election, the intersection was finally made: the yield on shares as represented by this index fell below that on irredeemable government stock for the first time.

Admittedly, the *Financial Times* index relates to only a limited number of companies and it can fairly be pointed out that for many years the yield on some shares had already been below that offered by gilt-edged. Too much should not therefore be made of the exact date of the point of intersection. It can scarcely be doubted, however, that the *Financial Times* index gives a sufficiently reliable indication of the growing preference for equities, and this assumption is confirmed by the fact that



the Actuaries' index of share yields also dropped below the yield on Consols at about the same time.

That mere shares should be preferred to the obligations of the British government appears very strange and shocking to some people, though their number is probably declining. Surely the prices of shares must be grossly inflated by speculation to produce so unnatural a result? Must one not anticipate a collapse of these exaggerated values that will restore a more proper relationship? With the level of share prices dependent upon so many factors one must indeed expect conflicting views to be expressed about the soundness of the position reached at any time. We shall not concern ourselves with short-run predictions but merely observe that an average yield below that on Consols cannot in itself be regarded as conclusive evidence that shares are over-valued. It would be possible, indeed, to take the opposite view and contend that, after twenty years of losses from inflation, what is really surprising is to find bond prices even as high as they are relatively to the prices of equities. After all, by 1959 the real value of £100 invested in Consols in 1947 had fallen by over three-fifths.

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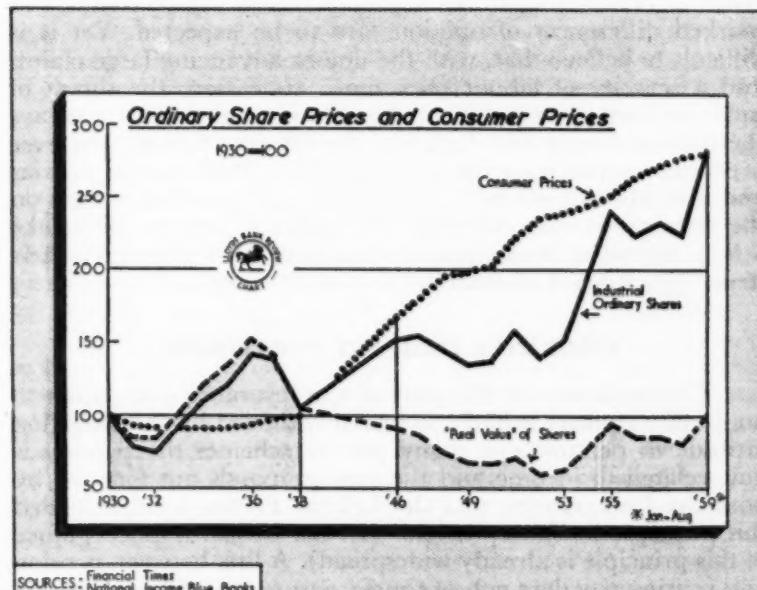
Now, it would not be true to say that equities have offered adequate security against inflation. On the chart opposite is plotted a curve which shows the price of industrials deflated by the index of consumers' prices from 1930 to 1959. The peak reached by this curve in 1936 has never been regained; even the 1938 figure, depressed as it was by fear of war, was not far below that for September this year.

If attention is confined to the post-war years, it would still appear that until recently equities were an imperfect hedge: their real value dropped between 1946 and 1952, recovered sharply and rose enough to bring a modest gain in real terms by 1955, fell once more and rose again between 1958 and 1959. Anyone who bought these securities at the average prices ruling in 1946 and sold them at the average prices ruling in the first eight months of 1959 (at an advanced stage of what many regarded as a "speculative boom") would have secured a *real* capital gain of the order of 10 per cent. By the autumn of 1959, however, the real gain would have been 25 per cent. as a consequence of steadily rising share prices and stable retail prices. The second chart on page 15 shows that the "real value" of dividends has also failed to recover its pre-war level. One must

not, of course, place too much weight on the indices but the impression conveyed by the two curves seems too clear to be readily dismissed.

The traditional objection to equities is that the return is uncertain and the capital itself may be lost. A detailed statistical calculation over the years 1936 to 1951 for 304 large industrial and commercial companies<sup>1</sup> shows that 10 per cent. made a gain of 27 per cent. or less where the gain includes both the dividends received and the change in the value of the equity. By comparison, 37½ per cent. could have been made by simply leaving one's money in the Post Office. These were the failures. But the top 10 per cent. gained 411 per cent. or more and the average gain was 180 per cent. (No account is taken here of the doubling of the retail price level over these years).

The risks to which equities are subject are clearly lessened by a policy designed to maintain full employment. Recessions may indeed occur and particular companies and industries will certainly suffer, whether as a consequence or for reasons more



<sup>1</sup> "The Reward for Risk-bearing by Shareholders in Large Companies" by P. Sargent Florence, *The Journal of Industrial Economics*, March, 1957.

peculiar to themselves. Dividends, however, tend to fluctuate less than share prices or profits, a highly relevant point for the institutional investor. Moreover, if it is possible to avoid serious depressions, there will obviously be less risk of complete loss on unfortunate ventures. And this is not all: for, with capital more continuously employed, the general rate of return may rise. Thus, full employment may seem to favour equities rather than gilt-edged in two ways, for the prospective return on the former will be increased while the real return on gilt-edged will decline if it is true that full employment brings with it the threat of inflation.

It may appear that the preference for equities rests somewhat too heavily on the assumption that inflation will continue. In fact, retail prices rose very little in Britain over the two years 1958 and 1959. May it not be that the inflationary phase was no more than a post-war boom unusually protracted for a variety of special reasons and made worse by weak policies that have now been abandoned? If so, does it follow that the preference for equities, however well-justified it may have appeared in the recent past, is now somewhat out of date? We are involved at this point in considering dubious predictions of future trends and marked differences of opinions are to be expected. Yet it is difficult to believe that, with the unions advancing large claims and a scarcity of labour once more appearing, the threat of inflation from domestic causes is really past, and there is always the further danger that inflation abroad may disrupt whatever precarious balance is established at home. At all events, persons and institutions have come increasingly to base their actions on the assumption that inflation will continue, and it would take a long period of stable prices to induce them to retrace their steps. This is what matters in the present context.

#### **INSURANCE COMPANY PORTFOLIOS**

The tendency on the part of the insurance companies to hold more equities is likely to be strengthened by the changing attitude to pensions. In many private schemes the pension is now related to income and the new proposals put forward by both the Conservative and the Labour Parties have extended this principle to State pensions. (In the U.S.A. the acceptance of this principle is already widespread). A link between pension and retiring pay does not, of course, ensure that the pension will be fully related to changes in the cost of living, for there will presumably be no further automatic adjustments after

retirement; but there is at least some protection up to that point.

The possibility of obtaining such pensions is liable to affect people's attitudes to annuities offered by life companies and even, as the "money illusion" disappears, to payments on death. The "with-profits" element in policies may become more important and more complicated inducements may have to be offered. It is already possible to buy a life policy with a minimum cash sum guaranteed and the prospect of any additional profits that may be made by investing the premiums in the shares of a unit trust. The life funds may thus be forced by competition to modify their procedures, gradually no doubt but in the end perhaps significantly, if they are to cope with the danger of continued inflation.

Now, these funds have been an important element in maintaining the prices of fixed-interest securities since the war. If the companies feel compelled to provide policy-holders with at least some compensation for rising prices, they will have to adjust their own portfolios in order to give still greater emphasis to equities or other assets that offer a similar advantage. Finally—and this is by far the most dramatic proposal—the Labour Party promises that part of the funds accumulated against its proposed pensions will be invested not in the State's own securities but in equities. The State will also buy the shares of the steel industry and some other industries as part of its nationalization programme under a Labour government. If at any stage the Party should be returned to power with this programme, the effect would be to increase the demand for equities and the supply of gilt-edged. Indeed, it is likely that in any event, as the Radcliffe Committee has observed, the supply of bonds will be maintained. "The fact that the State has become a habitual net borrower in peacetime necessarily tends to increase the total supply of fixed interest obligations."

With such prospects in view, at what level of prices will fixed-interest securities be held? Those who are prepared to contemplate with equanimity an indefinitely prolonged creeping inflation of, say, 3 per cent. a year, should accept that one consequence will be bond yields sufficiently high to provide *some* net interest after allowing for the fall in the value of money: that is, say, 6 per cent. on Consols could be regarded as reasonable in such an age of inflation<sup>1</sup>. Those who are by no means reconciled to creeping inflation can scarcely escape the unpleasant fact that, with opinion divided in the country on some of the measures needed to preserve stability, it will be extremely

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<sup>1</sup> Cf. *Report of the Committee on the Working of the Monetary System*, para. 572.

difficult to enforce their views at a cost in other directions that the community will accept. Moreover, although the inflation may be much weaker than it has been, private people and institutions have become increasingly wary of its effects. On balance, it would not be surprising if equities were at least to retain their position as compared with gilt-edged.

#### INDEXED BONDS

There may well be difficulties involved in the adjustment of bond prices to give an acceptable yield when slow inflation is feared. In the U.S.A., for example, there is a legislative prohibition on the payment of more than 4½ per cent. on Federal securities with a life of over 5 years. The defeat by Congress of the Administration's attempt to have this limit raised has thrown the bond market and the money market into confusion and actually enhanced the danger of inflation. (Indeed, even without inflationary fears, a higher rate might be needed if a more reasonable proportion of the very short-dated Federal debt were to be replaced by longer-dated issues.)

There is no such legal barrier in this country and bond yields may be high enough anyway. If renewed inflation should make lower bond prices necessary, this could involve an embarrassing fall in the value of portfolios. A possible solution would be to adopt an "indexed" or "valorized" bond on which nominal interest and capital would be adjusted to take some account of changes in the cost of living. The Radcliffe Committee gives this proposal a perfunctory mention and then dismisses it on the ground that it "would too plainly be a confession of failure to maintain a reasonable degree of stability in the value of money and might easily have disruptive consequences for our economic system" (Para. 573). It seems unfortunate that the Committee should have been content to repeat the conventional objection without setting out more fully the relevant considerations and without reference to the experience—not always encouraging, it must be admitted—of those countries that have adopted such a device.

It is true that if bond-holders were protected in this way, they would have less reason to object to inflation and thus one of the political forces in favour of price stability would be weakened. What is not clear is that this force is of great significance anyway. On the other hand the removal of this illicit and inequitable tax on bond-holders might affect the attitude of the Treasury: while it would be fanciful to suppose that the Treasury favours such a tax, it might be even more anxious to stop the price level

from rising if, with each rise, more cash had to be found for the national debt.<sup>1</sup>

Whatever may be felt about such arguments for or against valorized bonds, one conclusion seems to remain. It is that non-valorized bonds are unlikely to grow in favour, except very temporarily, as compared with equities. The presumption is rather in the other direction. There is therefore no reason to feel surprised that the *Financial Times* index of equity yields has fallen below the yield on Consols. There is nothing "unnatural" about this. On the contrary it would not be surprising if the general tendency, interrupted no doubt by short-run aberrations, were for the yields on irredeemable or long-dated bonds to stand above the yields on equities by a significant margin.

So far, the emphasis has been on the effects of inflation. If it were really possible to suppose that inflation had come to an end, would it then be reasonable to suppose that equities would lose their special attraction and sell only at yields above those available on gilt-edged stock? It must be recorded that in 1958 and 1959 the check to inflation brought real gains to shareholders, for share prices and dividends rose while retail prices remained steady. Was this rise in share prices and dividends merely a delayed adjustment? Would such increases ultimately cease with inflation? Or can it be supposed that, apart altogether from inflation, economic development will swell the value of dividends and raise the value of equities? These questions bring us to a consideration of what should be understood by the term "growth stocks".

## II

As a first approximation, a growth stock will be defined as one on which the rate of return on an initial investment is expected to rise. In buying Consols about the end of 1947, one bought an income of £3 per cent. On the Actuaries' sample of industrials the "current yield" was then about 4½ per cent., but only in the sense that this was the ratio between the last dividend and the current price. The dividends actually received crept upwards until, by June, 1959, the rate of return on the initial

<sup>1</sup> Whatever is thought of valorized bonds, there is a particularly strong argument on grounds of fairness for providing some form of valorized national saving certificate. It should be possible to hold in this way, perhaps £1,000, without fear of depreciation. It is all very well to say that a "better solution" would be to stop inflation. The fact remains that thousands of decent thrifty patriotic small-savers have been severely penalized while talk of "the better solution" has gone on. These small-savers are often unsophisticated about financial matters and should be protected.

investment would have been about 9 per cent. Here, then, was a basket of growth stocks in terms of money income; but changes in the value of money have been ignored. It would appear, however, that there was some growth even in real terms between these dates: the June, 1959, return, in constant purchasing power, was something like 5½ per cent. on the initial investment. It would, however, be possible to choose many intermediate dates when there was no such real growth.

It may be objected at once that the emphasis placed here on "rate of return" is too exclusive. Is it not true that one of the main attractions of growth stocks is the prospect of capital appreciation? In reply it can be repeated that the definition above is only a first approximation; but it may be added that the simplification involved in ignoring capital appreciation will appear less unrealistic if we put ourselves in the position of the investment manager of an institution—say a pension fund or an educational charity. Our manager, we shall suppose, takes a long view and buys to keep.

He is not interested in the wildly speculative capital gain nor even, to any great extent, in the capital gain that may be the reward of a serious and cautious appraisal. By and large he is not interested in capital gains at all. It is not perhaps necessary to go so far as to say that shares once bought will not subsequently be sold, but it can be supposed that such sales will be made only in extreme circumstances, in order to avert or minimize a serious loss rather than to realize a capital gain.<sup>1</sup> One does not suggest that all institutional investors behave in this way. Ours is a sober manager employed by a sober fund—but not so unrepresentative as to be unrealistic. We shall also suppose for the moment, in order to remove a further complication that will concern us later, that no change is anticipated in the ratio between retained and distributed profits.

So far we have been largely concerned with the comparison between gilt-edged and equities as two classes of securities. There will obviously be great differences among the equities and widely varying prospects of growth. When the prospect of growth is high, then it may be sensible to accept a low immediate yield if the (discounted) value of subsequent receipts is expected to offer fair compensation.

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<sup>1</sup> A policy of this kind is described by Mr. G. H. Ross Goobey, the manager of a large pension fund, in an article in the *Stock Exchange Gazette* for September 25th, 1959. It will be appreciated that one does not avoid speculation by buying in order to keep: one is then speculating on the soundness of one's original decision to purchase.

### LOW YIELDS CAN MISLEAD

Although a growth stock has been so defined that a low current yield need not be a deterrent, it would be an entirely false inference to suppose that low current yields are in themselves a sufficiently reliable means of identifying such stocks. This is a very different matter. Professor Sargant Florence has already drawn attention to this aspect of what he describes as "Stock Exchange Folk-Lore".<sup>1</sup> It may often be the case that stocks with high current yields will prove to be sound growth stocks, while those with no current yields may be disappointing. There is no reason to be surprised that this should occur, for it simply means that mistakes have been made. In valuing certain stocks at prices corresponding to high yields the market may be wrong in two respects: in the first place there may be insufficient knowledge of the relevant information that could be obtained at the time, and in the second place such information, even if reasonably complete, could not take account of all the uncertainties of the future.

There is, however, a further complication which is the direct consequence of the folk-lore to which Professor Sargant Florence refers. If, for some reason, a stock becomes acceptable on a low yield, the mere fact that the yield is low may in itself raise rather than lower its popularity, because it will be taken as evidence of growth. One does not wish to exaggerate the extent to which such irrationality can be carried, but it would appear to be sufficiently in evidence to warrant mention. In view of these possible errors of judgement it would be entirely unwarranted to conclude that a low-yielder will always grow more than a high-yielder. No such presumption can be made and the statistical evidence collected by Professor Florence is against it.

Another fallacious view is that "growth stocks" are simply those of growing companies. It is true that such companies are much more likely to offer a growing return on capital than merely static concerns; but the connection between growth of output or sales, on the one hand, and growth of the rate of return on the sum invested, on the other, is complicated, indirect and uncertain.

There have been many occasions in post-war financial history when this over-simple inference has been drawn about shares in particular companies or industries or even countries.

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<sup>1</sup> "Tests of the Validity of Some Stock Exchange Folk-Lore", *Three Banks Review*, March, 1958. See also the report of a study by Moody's Services, *The Times*, May 16th, 1958

return on additional investment? There appear to be several and we shall consider them in turn:

(1) The first possibility is the obvious one that there may be excess capacity in buildings and equipment such as to permit a rise in sales without a corresponding rise in capital invested. This is the situation in which most firms will find themselves during a general recession in trade. We have thus said no more, so far, than that it is desirable to buy shares when times are bad but likely to improve. But there are more complicated situations under this general heading.

Consider, for example, the situation at Kitimat and Kemano, where Aluminum Ltd. have their great new smelter and hydro-electric plant. The work has not been completed because the market for aluminium has been weak, but when the time is thought to be appropriate the postponed expansion will be made and output may, perhaps, be doubled. A large amount of new capital will have to be invested both for more power and ~~for new enabling plant but the capital cost was much higher~~ an educational charity. Our manager, we shall suppose, takes a long view and buys to keep.

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is, therefore, no easy way here of identifying growth stocks and no substitute for really detailed knowledge and research. Perhaps the clearest statement relates to "infant industries or firms". When a concern is quite new it is likely to encounter a variety of teething difficulties that will become less important with time. In the same way the growth of an industry, or an entire industrial area, may bring external economies in its wake.

The historical record is not easy to trace, but it is of some interest to record the conclusions reached by Professor Solomon Fabricant for the U.S.A. over the years 1889-1953:

Because the services of labor have become more and more expensive relative to those of tangible capital, there has been a strong incentive for business firms and other producers to substitute capital for labor. Yet—and this may be surprising—capital increased less rapidly than did output. On net balance, output per unit of tangible capital rose by about 1 per cent per annum. Technological advance and the other means to improved efficiency have led to savings of capital as well as of labor.<sup>1</sup>

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The most outstanding example was, of course, the great enthusiasm with which Canadian securities were bought for some time, on the ground that Canada was a "growing economy". However high the expected rate of growth, further analysis would be required to warrant the conclusion that the bulk of Canadian stocks would display growth *in the relevant sense*: for expansion of output requires more capital. This is the crux. What we are concerned with is the possibility of increasing returns on an initial capital investment, and an expansion of the total output of an industry will not necessarily bring this about.

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Suppose, for example, that one is looking at the scope for investment in Western Canada. The population is expected to grow, the towns to expand, new industries to develop, and so on. Can one therefore clearly regard as growth stocks the shares of the public utilities of that area? The answer would appear to be that no such inference should be drawn without further detailed and specific information. Sales of electricity will no doubt rise, but new generating plants will be required and transmission will have to be extended to more difficult areas; the position is further complicated by the need to turn at the margin from hydro-electric to thermal stations. How much extra capital will be needed? How does this compare with the estimated additional revenue available for the holders of the equity? Will the rate of return on the additional capital outlay be higher than the current rate of return on the existing capital invested? If it will be, then it may be sensible to accept a lower immediate return on capital invested in such companies than could be obtained by investing in other companies that offer no such prospects of rising marginal returns. If not, then the shares should be avoided; for the popularity that keeps their yield so low is probably based on the confused idea that growth in total turnover is what matters.

A further example is afforded by the large stores in San Francisco. In this rapidly growing area the shares of these companies might have appeared to offer good prospects of growth; but for a time some of the companies did not do particularly well because their shops were in the centre of the city and much of the new trade was in the suburbs. Shops in different locations were needed and that meant more capital. Again, the critical question was what happened to the rate of return. Over the past ten years, any area or industry that was expected to grow was

liable to attract funds in a way that lowered current yields to levels which, on a more reflective view, would have been justified only if more severe tests of growth had been applied.

A high ratio of retained total earnings is sometimes regarded as a promise of growth, and, in one sense, this is right: for a company that ploughs back a large part of its earnings is presumably planning to expand. Once more it cannot be taken for granted that the acceptance of a low current rate of return in dividends would be sensible in view of this promise of expansion. The retention of a high proportion of earnings implies that the shareholders are being forced to save. Their savings will allow the company to expand but that in itself will not be an adequate reward for the current sacrifice unless the return on the self-financed investment is itself adequate.<sup>1</sup>

### SOME CONDITIONS FOR HIGH RETURNS

It has already been conceded that a rise in sales may bring with it a higher return on capital, for reasons to be considered shortly. What we are rebutting at the moment is the suggestion that there is any direct and simple relationship. Suppose now that national output were to rise for some time by 3 per cent. a year in real terms, and suppose too that profits and dividends rise correspondingly. Can it be inferred that there will be a commensurate rise in the rate of return on capital? That clearly cannot be taken for granted, since more capital may have to be invested to make possible the 3 per cent. rise in output. One cannot say, without further inquiry, how the ratio of profits to capital will change. This may, perhaps, appear to be labouring the obvious. That it is not apparently so obvious after all has to be inferred from the way in which the prospect of growing output is so often regarded as sufficient to identify a growth stock.

What conditions, then, are likely to suggest a high rate of

<sup>1</sup> Suppose, for example, that there is a choice between investing £100 in a bond yielding 4 per cent. or buying a share with a 10 per cent. earnings yield and a 2 per cent. dividend yield. In order to illustrate the argument it will further be assumed that both the earnings yield and the dividend yield are expected to remain unchanged. The ploughing back of profits will, it is true, raise future profits and dividends but only very slowly. In the second year profits will be up by 10 per cent. of £8, and of this £0.8 one-fifth, £0.16, will be paid out as additional dividends. In the following year there will be a further gain, and so on. This slowly rising stream of dividends must be discounted and its present value compared with that of the annual payments on the bond. It is only necessary to work out a few examples of this kind in order to appreciate how difficult it is to justify a low current yield except on the assumption of a *rising* earnings yield on the investment or a rise in the share of distributed profits.

return on additional investment? There appear to be several and we shall consider them in turn:

(1) The first possibility is the obvious one that there may be excess capacity in buildings and equipment such as to permit a rise in sales without a corresponding rise in capital invested. This is the situation in which most firms will find themselves during a general recession in trade. We have thus said no more, so far, than that it is desirable to buy shares when times are bad but likely to improve. But there are more complicated situations under this general heading.

Consider, for example, the situation at Kitimat and Kemano, where Aluminum Ltd. have their great new smelter and hydro-electric plant. The work has not been completed because the market for aluminium has been weak, but when the time is thought to be appropriate the postponed expansion will be made and output may, perhaps, be doubled. A large amount of new capital will have to be invested both for more power and for new smelting plant, but the capital cost per ton should be substantially less than was initially required when this vast industrial enterprise was first established in the wilderness. In the language of the text-books there was a large "indivisibility" in the capital needed to raise production at Kitimat to its present level—sites had to be cleared in the forest, roads built, rivers diverted, tunnels bored through mountains and public utilities of all kinds created. There should now be increasing returns to capital at Kitimat and Kemano and the shares of the company would appear, on this score, to offer prospects of growth in our sense of the term.<sup>1</sup>

(2) The situation just described appears to be a particularly striking case of an indivisibility but there will be many other less dramatic instances. Apart from such possibilities, what are the prospects of expanding output at a falling capital cost? Familiar points come to mind about possible economies of scale in production, in management, or in marketing. Once more, it cannot be taken for granted that growth in size will necessarily bring such economies. Here we are involved in the familiar debate about the effect of size on efficiency. The answer will clearly vary from industry to industry and may also, indeed, vary from firm to firm within an industry as a consequence of differences in the individual qualities of managements. There

<sup>1</sup> It is for the investor to decide whether or not the prospects of growth have been adequately discounted in the current price. The object of the argument above is neither to encourage a particular purchase nor to deter from one!

is, therefore, no easy way here of identifying growth stocks and no substitute for really detailed knowledge and research. Perhaps the clearest statement relates to "infant industries or firms". When a concern is quite new it is likely to encounter a variety of teething difficulties that will become less important with time. In the same way the growth of an industry, or an entire industrial area, may bring external economies in its wake.

The historical record is not easy to trace, but it is of some interest to record the conclusions reached by Professor Solomon Fabricant for the U.S.A. over the years 1889-1953:

Because the services of labor have become more and more expensive relative to those of tangible capital, there has been a strong incentive for business firms and other producers to substitute capital for labor. Yet—and this may be surprising—capital increased less rapidly than did output. On net balance, output per unit of tangible capital rose by about 1 per cent per annum. Technological advance and the other means to improved efficiency have led to savings of capital as well as of labor.<sup>1</sup>

It will be appreciated that calculations of this kind are beset with very great difficulties of both a conceptual and a statistical nature. How does one measure capital, or even output, over a long period of years? How far is it safe, above all, to extrapolate these results to the future? If, notwithstanding these difficulties, the statistical inquiry has significance it would appear to suggest that equities in general can promise growth without the special aid of inflation.

(3) A growth in sales, even if it requires more capital, may thus often bring a higher rate of return. As the company becomes larger it may become more profitable; but it would be quite a different matter to suggest that companies already large will show more growth than smaller or medium-sized concerns. Generally speaking, the shares of large companies are sold at lower current yields than those of small companies. More growth would therefore be required of the former to compensate for the immediate sacrifice. The big companies have a clear financial advantage: they can retain a larger proportion of their profits because shareholders will tolerate a lower return on the shares of a very well-known and presumably "safe" concern. Moreover, the large companies can obtain outside finance very easily when they want it. On the other hand, the obstacles to further growth may become increasingly serious and management may present special problems. Examples could be

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<sup>1</sup> *Basic Facts on Productivity Change* by Solomon Fabricant, National Bureau of Economic Research, 1959.

given of large well-established firms in growing industries that have failed to share in this growth.

(4) One of the most difficult problems in the search for growth stocks is to know how to allow for technological progressiveness. One's first reaction is, perhaps, to say that the innovating concern is one that can be expected to raise the rate of return on its capital, and it is indeed reasonable to favour such firms as against those that appear to be technologically stagnant. This is so not only because technological improvements may raise the return on capital, but also because a readiness to innovate is in itself an indication that the management is alive, and an active and lively management may secure economies both by innovating and in other ways as well.

What is rather more difficult is to decide whether among a group of innovating firms it is wise to choose the pioneers. We may indeed accept the general ruling that the dynamic firm which is prepared to change both products and processes will offer rewards to the investor who can wait in excess of those which may be expected from the stagnant unchanging concern. But within this dynamic group should one welcome those who take up innovations at the earliest stage or those who move in a little later?

Pioneers may undoubtedly win large rewards. For a time they may be alone in the field and thus secure a rate of return above what could be maintained individually when competitors have arrived. Moreover, by being first a firm may permanently establish goodwill and thus secure a special reward for having taken the first step. But one cannot be sure about this. It is the early concerns that will have to encounter the teething difficulties, and it may be that when these problems have been solved competitors can move in quickly in a way which leaves the pioneers only a modest reward for heavy expenditure on research and development.

Here one must ask detailed questions about the nature of the product, the possibility of obtaining and defending a really valuable patent, and so on. There is a further complication. Suppose we are considering investment in a firm with a high ratio of retained to distributed profits which appears to be justified for the time being on the ground that some important technological innovations are being made. If its shares are to be regarded as a good purchase at a low current dividend yield, is it being assumed (a) that total profits will rise so substantially as to give a handsome reward in dividends, even if the ratio of

distributed to retained earnings remains unchanged, or (b) that this ratio will in fact rise? The second assumption, if it is the crucial one, may prove somewhat dubious; for a really dynamic management will always want to press ahead from one innovation to the next. It will still be inclined to hold back a large part of earnings, and to go on doing so because it is so much interested in the growth and development of the firm, and in the exciting business of advancing economic change. There may, that is to say, be a difference in outlook between management and shareholders.

(5) We have now relaxed one of the assumptions made at the beginning of the article: the assumption that the ratio of dividends to retained earnings remained constant. The definition of a growth stock must therefore be extended. The first approximation was that a growth stock was one on which the rate of return on initial investment could be expected to rise, and with the ratio of distributed earnings unchanged "the rate of return" could be taken to refer to both total earnings and to dividends. It is doubtful whether anyone would feel happy about classifying as a growth stock one on which dividends, but not earnings, were expected to rise; for companies that have ceased to expand are liable to decline, and declining or even stationary industries do not attract good managers as a rule. We can, however, add that the attractiveness of the stock, which will warrant the acceptance of low initial yield, will be greater if, as earnings rise, the proportion of earnings distributed is also likely to be raised.

An example of the more complex type of growth stock is that of a firm where a long period of gestation must be expected between the time when the initial investment is made and receipts in excess of operating costs begin to accrue. The oil companies are, of course, the outstanding example. When the companies are large, the profits from earlier operations will allow dividends to be paid while nothing is being earned on capital invested in new exploration and drilling. When the company is a small developer there may be no dividends at all. Indeed earnings may be zero, or even negative, and it will be known that, after earnings have begun to accrue, a further considerable period may elapse before dividends on a significant scale can be paid. The shares will nevertheless be bought and often bought with enthusiasm. The investors clearly feel that they have discovered genuine growth stocks and are prepared to wait for a lengthy period, perhaps for years, for their reward.

Their readiness to buy such stocks will then depend upon their views about the uncertainty of the reward, their readiness to take risks and their scheme of time-preference. The future earnings, before they can be regarded as acceptable, should be discounted if a rational calculation is to be made in order to allow for the period of waiting.

#### THE PRIVATE INVESTOR

So far, the prospects of growth have been viewed through the undeniably sober eyes of the investment manager of a sober institution. Higher income from investment rather than capital appreciation has been the objective. At the opposite extreme is the small private investor whose main concern is with capital gains. His capital is too modest for his dividends, after tax, to add very significantly to his income. Acceptance of a low immediate return will not trouble him, provided the prospect of a capital gain is there. Between these two extremes will be private persons whose dividends are a larger part of their income; they, too, may buy growth stocks and they will do so with an eye on both future dividends and possible capital gains. There will also be some institutional purchasers in this intermediate position.

Now, the pursuit of high dividend gains and high capital gains need not lead in different directions. It would be somewhat surprising if they did and would indicate mysteriously perverse forces at work in the market. The conclusion suggested by general reasoning has been supported by another empirical test made by Professor Sargent Florence.<sup>1</sup> This conclusion may be recorded: "Of the low capital gain companies, 79 per cent. had also a low dividend gain; and of the high capital gain companies, 81 per cent. had also a high dividend gain." A perfect correlation could not be expected in a market where such widely varying preferences, complicated by great differences in liability to taxation, are represented; but the degree of positive correlation is clearly high.

On general grounds it can be expected that, in the case of a successful growth stock, capital value will grow rather more rapidly than dividends or earnings. The explanation lies in the change in a company's market status that can be expected as its success becomes more generally known. The shares of larger companies sell, for fairly obvious reasons, at lower yields than do those of small companies, and the mere expansion of a company may therefore bring a special capital gain, apart from any

<sup>1</sup> "Tests of the Validity of Some Stock-Exchange Folk-Lore", *loc. cit.* p. 6. The high dividends are those received over the period of years in question after the purchase of the stock. We are not here dealing with the question of a high *initial* yield.

capital gain that may be the reflection of a higher return on invested capital. The institutional investor is likely to benefit less than the private investor from such improvements in market status because institutions often regard little-known shares as too risky and will anyhow have difficulty in obtaining economic packages without acquiring too large a part of each equity.

The individual investor, or the more active type of institution in search of capital gains, will often take a fairly short view and pay rather more regard to the effect of minor cyclical booms and recessions than has been done in much of the preceding discussion. Investors of this kind will also rely for their profit largely upon the chance of discovering promising openings for investment before the rest of the market has become aware of them. Some of the stocks they buy may offer little or no immediate return in the form of dividends, but they will be unwise if they regard as stagnant and unpromising all those with a current yield much *above* the average. The high yield on a little-known stock may mean simply that the market in general has failed to appreciate its potentialities.

\* \* \*

In this discussion of growth stocks, too little has been said about the importance of management and a number of other considerations have been ignored: gearing; liquid assets; "cash flow", i.e. earnings for equity *plus* depreciation; the measurement of capital and profits; the complications arising from government contracts, and much else. Moreover in a general review of this kind, little more can be done than to indicate what appear to be some of the critical tests and point to the danger of certain pitfalls. Again and again the argument must be hedged and qualified when one is discussing such matters as technological progressiveness and the respective merits of large and small companies. Clearly there are no large and easily identifiable categories to which the label "growth stocks" can be confidently attached. Much detailed and specific analysis is necessary; but it may be an advantage, before embarking upon such a search, to have tried to define what one means by "growth" and to have noted at least some of the characteristics that should be sought in identifying a growth stock.

Thomas Wilson.

*University of Glasgow.  
October, 1959.*

# Wage Flexibility and the Distribution of Labour

*By W. B. Reddaway*

## I

### THE NATURE OF THE PROBLEM

**M**OST discussions about the usefulness or otherwise of a "wages policy" have been primarily concerned with the question of the *general* level of wages, rather than with the question of the relative wages of particular industries and occupations. The latter point has, however, commonly been raised as a related issue, partly because it is considered important for securing desirable changes in the distribution of the country's labour force. It is this second question—of *relative* wages and the distribution of labour between industries and occupations—with which this article is concerned.

It may help to focus the issue by starting with a quotation from the first report of the Cohen Council, which in fact inspired the research on which the article is based. In paragraph 146 the report says:—

We think it most important that the flexibility of relative wages in response to changes in the demand for labour should be preserved, since in a free enterprise economy without direction of labour this is the main means on which we must rely for ensuring the most efficient distribution of the country's labour force.

This view may perhaps be contrasted with a different one, which starts from the idea that, whether we like it or not, wages are not fixed in this way in response to the forces of supply and demand; for example, Lady Wootton has stressed the importance of social considerations in the fixing of relative wages. If one takes this view of the way in which wages are fixed, then the fact that the distribution of labour between industries and occupations does in fact change substantially, necessarily implies that there is some other force which is responsible. This alternative view of the labour market may perhaps be set out as follows:—

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Changes in the demand for labour in the various industries and occupations operate to secure a redistribution of the labour force mainly through direct changes in the 'job opportunities' made available by employers, and the vigour (or lack thereof) with which the employers seek to recruit workers.

This hypothesis does not, of course, deny that employers will find it easier to fill posts if they offer higher wages. It asserts rather that in the main employers adjust their labour force, whether upwards or downwards, by varying the number of men whom they are willing to take on or whom they dismiss. An industry which is experiencing an increased demand for its products, or in which firms wish to increase their labour force for other reasons, will typically be an easy one in which to get a job because nearly all employers are willing to take on men nearly all the time—and perhaps not too fussy about qualifications: the effective demand in that industry is widespread in space, time and perhaps "character". In an industry which is contracting, on the other hand, "no vacancies" is the rule at all firms, and some men may be dismissed. The wage in the former industry may be no higher<sup>1</sup> than in the latter, but the desired changes will be effected without the rates being changed.

It is not, of course, necessary to believe that adjustments work *exclusively* in this way, without any assistance from changes in the wages offered. The essential characteristic of this "alternative hypothesis" is that the *main* way in which employment will be either increased or reduced is through "direct action" by the employers, and that only exceptionally will they have to include a change in the relative wage offered in order to secure the desired number of workers—or at least that the change in relative wage will usually be so small that it is hard to detect in a world where other wages are also changing.

If we are to compare the validity or plausibility of this hypothesis and the one put forward by the Cohen Council, it is first necessary to clarify somewhat the meaning of the latter. The word "preserved" seems to imply that we have had such flexibility of relative wages in the past; but the passage quoted comes immediately after a statement that the forces of supply and demand are apt to be impaired by the "persistence of customary differentials, based on abstract notions about the comparable merits of different types of job and no longer

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<sup>1</sup> An important additional point is that potential entrants need to take account of all sorts of factors besides the cash wage, and comparison of these may be difficult, quite apart from the fact that different people will attach different degrees of importance to particular factors. There is no reason to be surprised if either of two industries in a town would secure a reasonable flow of new recruits if it announced vacancies—even at a time of "full employment".

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## I

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<sup>1</sup> An important additional point is that potential entrants need to take account of all sorts of factors besides the cash wage, and comparison of these may be difficult, quite apart from the fact that different people will attach different degrees of importance to particular factors. There is no reason to be surprised if *either* of two industries in a town would secure a reasonable flow of new recruits if it announced vacancies—even at a time of "full employment".

corresponding to contemporary requirements". Perhaps we should assume that in the Council's view, there had been *some* of the desired flexibility, but not as much as they would have liked.

Nor is it altogether clear what the consequences would be if relative wages do not show the desired flexibility. Perhaps the most natural meaning is that too few workers would be attracted to occupations or industries which ought to expand, whilst too many would remain attached to industries which are contracting. It is easy enough to picture the consequences of the first of these. For example, in the immediate post-war years there was a shortage of typists, which particularly affected government departments, where the typists' wage was fixed by a scale in which the typist had traditionally occupied a relatively low place. So long as no more than this wage was offered for a typist, government departments found that they suffered from a chronic shortage and could not in fairness prevent some of their typists from applying to be promoted to vacancies in other ranks in the service where they were much less needed but where the pay was higher. The result was a "bottle-neck", revealed to the public in the form of duplicated letters sent to inquirers saying that their letter had been received, and that a reply had been drafted and sent to Scotland for typing.

So far as the contracting industries are concerned, however, the position is not so clear. There is usually nothing which compels an employer to retain workers whom he does not need—at the very least, he can refrain from replacing normal wastage. Consequently, even if the relative wage is not lowered in the way regarded by the Cohen Report as desirable, there seems no reason to suppose that the numbers *in employment* in the industry will fail to contract. And it seems unrealistic to think that an undesirably large number of workers will remain "attached" to the industry on the strength of a maintained wage-rate, if a sizeable proportion of them are unable to find a job at that wage; unemployment is at least as powerful an incentive to move elsewhere as a wage-cut *for the people affected*.

The Cohen Council would, I think, hardly deny that contractions in an industry's labour force, or in the number of some particular type of workers, can be secured without a fall in relative wages, through dismissals and non-replacement of wastage. The argument in favour of wage flexibility here would have to run in more subtle terms. Thus, they might argue that a wage-cut would reduce the number of transfers needed, and so the risk of unemployment—e.g., by enabling the industry to

quote lower prices, or by making it possible to continue a little longer the use of traditional craftsmen rather than to switch entirely to machines. Or they might argue that dismissals are liable to be concentrated on workers who cannot easily transfer to other jobs, whilst a lowering of the wage would stimulate mobile people to leave, and let the immobile stay at work. Or they might advocate wage-cuts in contracting industries and occupations on quite other grounds, such as the need to keep down the general level of prices.

There may be some force in these arguments, but for the question in hand—the distribution of labour between industries and occupations—they are probably secondary: an industry's labour force clearly *can* be contracted without a cut in relative wages, by a reduction in the jobs offered. Moreover, the labour market is inevitably not left to the unfettered working of atomistic competition, and the co-operation of the unions is likely to be needed both over a sound system of redundancies and over measures to raise productivity (and so the wage which can be paid to a reduced labour force.) There are real advantages in not *also* asking them to agree to a major cut in their customary differential in the interests of "wage flexibility".

The real question comes with industries or occupations in which the demand for labour is expanding. In a sense, perhaps the difference between the two view-points is only a matter of degree. Clearly, the industries cannot expand without an increased number of jobs being offered—the advocates of wage flexibility doubtless "take that as read", and would hardly deny that some expansion can be secured by that means alone.<sup>1</sup> On the other side, it is not denied that an increase in relative wages would help, and might indeed on occasions be essential—especially if it is a matter of increasing greatly the number of people in an occupation which traditionally carried a low wage. In particular, the difference of views would be small if the advocates of wage flexibility believe that workers will respond freely to a *very small* change in relative wages—assuming of course that it is backed up by an increased number of jobs being offered in expanding industries, and by dismissals in contracting ones. The proponents of the alternative hypothesis might then say that they find it hard to believe that an industry

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<sup>1</sup> In text-books on supply and demand the quantity offered in a market is commonly represented as depending on the price offered by buyers: this may explain why economists are liable to underestimate the extent to which the quantity offered responds to increases in the quantity demanded without any change in price, especially if the increased supplies are actively sought. Such a response can be particularly important if the demand progressively grows at a modest pace—as often happens in the labour market.

can recruit workers easily by offering an improvement of (say) 2 per cent. in the relative wage, but that this "flexibility" is vital: they might well add, however, that the issue is of no real importance on that basis, because such a small change, if vital, will be easily secured—if only through better chances of earning over-time or securing promotion in an industry which is short of labour.

The Cohen Council did not, however, say that very small changes in relative wages would suffice; indeed, by implication they seemed to deny this, since they regarded it as "most important" to have flexibility of relative wages in response to changes in the demand for labour, and in effect contrasted this with the views about "fair wages" and the like which are stressed in a process of collective bargaining. There is therefore an issue of practical importance: is it really necessary to try to persuade negotiators to change their ways or not? What would this process of education mean, and could it be achieved if considered desirable?

The changes would not be all on the unions' side, though one tends to think first of persuading them to agree that wages in contracting industries should be reduced, "even though highly skilled workers would then be earning no more than routine workers elsewhere". Wage flexibility would also require that employers should not be inhibited in *raising* the pay of a type of labour which is scarce at the moment by views about "customary differentials" or the inherent skills involved (or not involved). Moreover, the policy would not work unless both sides assumed that wages in future would similarly be settled in the light of circumstances *then* prevailing. It must be at least tacitly agreed that acceptance of a low wage now, because there is too much labour in the industry, would not in any way imply continuance of that wage when it (and dismissals) had duly diverted the surplus to other industries. Similarly it must be assumed that payment of scarcity rates of wages now would not imply their continuance after more workers had been attracted.

So far as the distribution of labour is concerned, the most important part of the change would be the acceptance of the view that wages should be freely raised above their normal rating for types of workers in short supply (and then freely lowered again if and when the shortage is overcome). Failure to get cuts in relative wages in declining industries would not, as we saw above, prevent their labour force from declining: dismissals are a substitute for low wages as a means of diverting workers, whereas there is no corresponding "forcible" means of

securing an increased labour force if the wage is too low to attract workers (even when supported by vigorous advertising of vacancies, etc.).

This asymmetry may perhaps provide an additional reason—over and above the simple influence of “job opportunities”—why the distribution of labour has been reasonably responsive to changes in the demand for labour, even though the negotiators of collective agreements have not made that an overriding principle in fixing their bargains. For employers with an expanding demand who find that they cannot attract recruits for the jobs which they offer are not usually prohibited from offering higher pay, and this latitude may well have been used to overcome real bottle-necks.

## II

### THE RÔLE OF RESEARCH

What, then, can research into the facts do to throw light on the need, or lack of need, for a campaign to influence the principles followed in wage-fixing? The answer seems to be that it can establish nothing conclusively, but that it is nevertheless helpful to examine such things as the extent to which industries which have changed their relative share of the labour force have in fact raised (or lowered) the wages which they pay relative to the average, or have ended up by paying more or less than the average. The *amount* of the movement in relative wages is important, as well as the frequency with which expanding industries have had to improve their relative pay.

The limited objective of such procedure must be stressed:

- (a) It is concerned solely with finding out what did happen—not with whether some other method of reaching the new labour force would have been possible or preferable. (As already stressed, the “job opportunity” theory does not in any way deny that it is *easier* to fill vacancies if you raise the pay: we do not need research in order to establish that most people prefer a job with higher pay to one with lower pay if they consider that other things are equal and the choice is effectively open to them at the critical moment).
- (b) For the moment at least we are not concerned with causation, merely with what things are associated. Thus, higher numbers might be associated with higher relative wages because the unions seized the opportunity to demand these, although the additional

workers would in fact have come if the job opportunities had been made available without the rise in wages. Lower numbers might fail to be associated with lower relative wages because the unions in contracting industries were strong enough to resist a cut, even though the individual workers might have preferred a lower relative wage and a smaller risk of dismissal.

- (c) In particular, it is always *possible* that an increase in numbers originated from a change on the supply side, which was independent either of the wage offered or of job opportunities. Thus, the great increase in the number of clerks and other white-collar workers which has been observed over the last half-century or more, despite a fall in their relative wages, is clearly to be explained mainly by the system of universal education. It would not, of course, have happened if the number of job opportunities in this line had not grown greatly with the greater complexity of life in a wealthier community; but without the improved educational system it *might* have been necessary for employers, in order to attract the necessary numbers, to raise the relative wage offered, instead of lowering it.<sup>1</sup>

When the facts have been assembled, it will be possible to review alternative interpretations of them. But further discussion of that is best left to Section IV.

### III THE DATA

#### A. Manufacturing Industries taken Singly

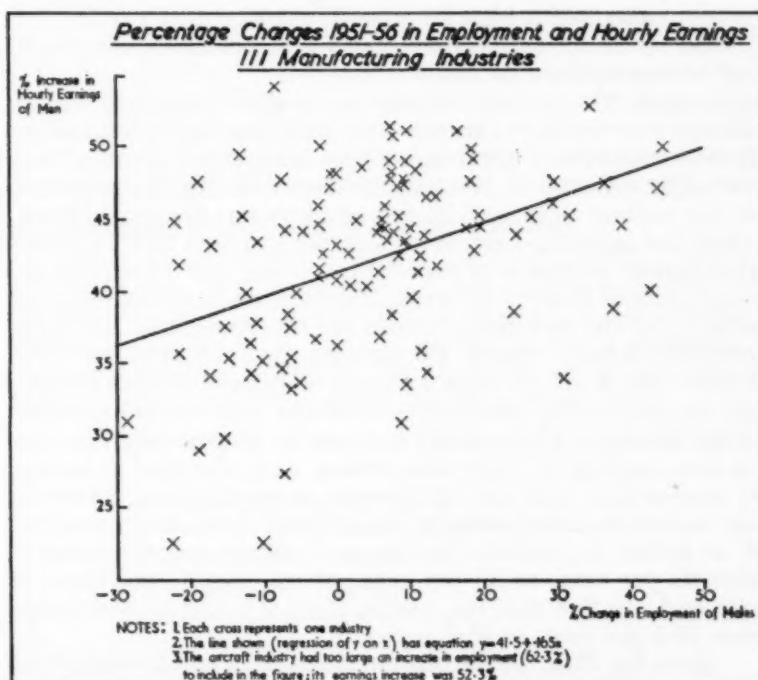
The first set of data presented relates to the 111 separate manufacturing industries covered by the Ministry of Labour's earnings inquiries.<sup>2</sup> For each of these we have the average

<sup>1</sup> The obverse of the above case is more complex, but really lies outside the scope of this article. The number of people doing various labouring jobs, of a simple but often disagreeable kind, has fallen, whilst their wage has risen relatively to the average (though usually remaining below it.) This is partly because improved education has reduced the number of people incapable of holding a better post, but largely because full employment has greatly increased the number of better posts which are in fact available. The case for wage flexibility as against customary differentials is probably at its strongest when stressing the need for paying enough for such "dirty" jobs to attract the numbers whom we need; in a sense it is a testimony to the power of job opportunities (plus mechanization and selective immigration) that we are not suffering from acute shortages of some goods and services which used this type of labour.

<sup>2</sup> For *employment*, the figures used are the Ministry of Labour statistics for May of each year, and for hourly *earnings* the Ministry's returns for April of each year.

The years used were selected essentially on the basis of convenient availability of figures at the time the research was done. *Average earnings* were used rather than agreed wage-rates for two reasons:—(a) wage-rates were not available for all the various industries; (b) it was considered desirable to work with statistics of actual payments, rather than agreed rates,

hourly earnings of men in April, 1951, and April, 1956, so that we know the percentage increase over the period. We also know the percentage movement from 1951 to 1956 in the number of males employed. Each industry therefore provides one point or



since otherwise the force of "wage attraction" would be underestimated by omitting the influence of changes in the extent to which employers pay more than the agreed rates. *Hourly* earnings were used in preference to *weekly*, so as to minimize the influence of short-time and overtime work in the week in question, which might be purely ephemeral factors. (To the extent that overtime is paid at more than the ordinary time rate, some influence of overtime does remain in the hourly figures.) Figures for *men* were used rather than those for "all workers", so as to avoid any distortion of the earnings comparison which might be produced by changing proportions of women and juveniles *at* between the two years. A separate calculation might have been made for *women*, but the statistics would have been of no real use in a fair proportion of industries, where the number of women employed is very small; it was not found necessary to reject any industry on grounds of an inadequate number of men. The fact that the employment statistics relate to *all males*, rather than to *men*, is thought unlikely to make any significant difference to the comparison; figures for men only were not available. Similarly, the fact that the earnings figures relate to the United Kingdom, whilst the employment figures relate to Great Britain only, is considered unlikely to make any significant difference to a comparison of *movements*.

observation in the diagram (page 39), which gives a convenient way of seeing two things:—

- (a) What sort of movements took place, both in wages and employment; and, in particular, how varied the movements were in each case from industry to industry.
- (b) How far industries with a high increase in employment also had a high increase in wages.

So far as the actual movements are concerned, the results can be summarized as follows:

*Employment.* The average change in numbers employed was an increase over the five years of 5·3 per cent., but the individual industries showed very great variations—far greater, perhaps, than one might expect from some discussions of the rigidity produced by the welfare state and its full employment pledge. Without taking the individual extreme cases, we can note that 10 industries showed increases of over 30 per cent., and 10 showed decreases of more than 15 per cent. If we want a more conservative indicator of the variations, we can say that one-third (37) of the industries showed rises of 9·6 per cent. or more, and one-third showed falls of 2·5 per cent. or more. Whatever the mechanism, big changes in the distribution of labour were in fact effected. *Hourly Earnings.* The average increase in hourly earnings over the five years was 42·3 per cent.—measured, of course, in money. By comparison with the movements in employment, however, the variations from industry to industry were much smaller. If, as before, we exclude the top and bottom ten, the range is from 33 per cent. to 50 per cent.; if we exclude one-third at each end, we find that the middle third is in the narrow range from 40·8 per cent. to 45·2 per cent.

How far, then, do the biggest increases in employment tend to go with the biggest increases in earnings? The diagram gives a general picture: there clearly is some tendency for this to happen—the points show some tendency to cluster round a line running from the South-West to the North-East. But the association is not very close.

This general impression may perhaps be clearer from Table I, which summarizes the diagram by dividing the industries into "high", "medium" and "low" groups in respect of both employment change and earnings change. There is clearly a tendency for an industry which is rated high on employment increase to be rated high on wage increase also: 56 out of the 111 industries (i.e., one half) get the same rating on each test. But these ratings are very broad, and even so there are some interesting exceptions: 8 industries which come in the top category for

employment increase come in the bottom one for wage increase.<sup>1</sup>

One final statistical device is also useful. A straight line has been fitted to the diagram so as to tell us what value of the wage-change one will *tend* to find in an industry whose employment change is of any size we may select. The equation is given under the diagram: expressed in words it tells us, for example, that an industry with an employment change 10 per cent. greater than the average (i.e., 15.3 per cent. instead of 5.3 per cent.) will *tend* to have a wage increase 1.7 per cent. greater than the average (i.e., 44 per cent. instead of 42.3 per cent.). The emphasis here must, however, be strongly on the word "tend": the diagram shows that in some industries the actual wage increase was very different from the one indicated by the line.

## B. Manufacturing Industries by Groups.

Before attempting to interpret these results, it is useful to see the picture as it emerges when the various industries are grouped into the 14 Industrial Orders used in the Standard Industrial Classification (i.e., when we have, for example, a single employment figure for "textiles", instead of 15 separate ones for cotton spinning, cotton weaving, wool, and so on).

TABLE I

*Cross-Classification of 111 Manufacturing Industries by Percentage Changes between 1951 and 1956 in:-*

- (a) *number of males employed*
- (b) *average hourly earnings of men*

% Increase in earnings	% Change in employ- ment	Decrease of 2.5 or more	-2.5 to +9.3	+9.6 and over	Total
45.2 and above	5	15	17	37	
40.8—45.2	9	16	12	37	
up to 40.5	23	6	8	37	
Total	37	37	37	111	

<sup>1</sup> It is also useful to express the result in a statistical measure, the correlation coefficient, which is about .43. The square of this coefficient (.185) tells us that between one-sixth and one-fifth of the variations in one of the variables (e.g., wage movements) from its mean can be "explained" by reference to the variation in the other; it cannot of course tell us anything about the causal process. This degree of statistical explanation is interesting—the figure is far too high for one to say that it has arisen as a matter of statistical chance—but the explanation is clearly far from complete.

The result is shown in Table II, in which the Orders have been arranged according to the size of their change in employment. On this basis there is, as was to be expected, a smaller spread of movements in employment, though it is still considerable. The greatest increase shown by a single Order is 18·7 per cent. (for vehicles), and the biggest fall is 17·2 per cent. (for leather etc.). Without these two extreme cases, the range is from +13·3 per cent. to -8·9 per cent. For *earnings* movements the spread is also somewhat reduced, but not very much: without the highest and lowest Orders the increases range from 48·6 per cent. to 34·1 per cent. which is not much less than we obtained for the individual industries, after cutting out ten at each extremity.

TABLE II

Industrial Order	Changes 1951-56 in number of males employed	Rise 1951-56 in Average Hourly Earnings of Men	
		% Deviation from Average Rise	Actual % Rise
Vehicles	+18·7	+12·0	47·0
Engineering, Shipbuilding, Electrical Goods	+13·3	+15·9	48·6
Paper and Printing	+10·8	+18·0	49·5
Chemicals etc.	+9·4	+4·4	43·8
Miscellaneous manufacturing	+7·8	+3·9	43·6
Metal Manufacture	+5·5	+9·4	45·9
Food, Drink and Tobacco	+5·1	+3·9	43·6
Precision instruments, Jewellery etc.	+4·8	+2·0	42·8
Bricks, China, Glass etc.	+3·6	-3·0	40·7
Miscellaneous metals	+2·8	+5·1	44·1
Wood and Cork	-7·1	-19·4	33·8
Clothing	-8·2	-15·6	35·4
Textiles	-8·9	-18·0	34·4
Leather etc.	-17·2	-18·7	34·1
Average	+2·87		41·9

The most striking feature of the results is, however, the much more marked association between the two movements. All the highest increases in earnings come near the top of the table and all the lowest near the bottom. The Orders were in fact arranged according to the size of their employment movement, but they are also roughly in the order of their rise in earnings. In statistical terms, the correlation coefficient has indeed gone up from .43 to .92; more significantly, its square has gone up from .185 to .85—and even with perfect correlation (i.e., all points exactly on the regression line)<sup>1</sup> the coefficient is only 1.0.

### C. Industries within the Groups.

In view of the pictures revealed in the above two sections, it is of importance also to examine the movements in employment and earnings for the industries *within* each of the various Orders. Unfortunately, this information is not so easy to present in detail, but the general conclusion is clear enough.

The engineering Order (more strictly, "engineering, ship-building and electrical goods") will serve as a good illustration. The 17 industries comprised within this Order show a very wide range of employment movements between 1951 and 1956, ranging from three decreases (including one of 17 per cent. for textile machinery) to two increases of over 40 per cent. (for wireless apparatus etc. and valves etc.). On the other hand, the *earnings* movements are all grouped within a rather narrow range, from 40.2 to 52.9 per cent.; indeed twelve of them fall within the range 45 to 50 per cent. Moreover, statistical analysis shows no real association between the movements. In effect, the industries all have much the same wage-movement but widely different movements in employment; and there is no significant tendency for such variations in wage-movement as there are to be associated with variations in the same direction for employment.

The other Orders do not all show quite such clear-cut results, and many of them have too few industries within them to permit much of a conclusion.<sup>2</sup> Nevertheless, it is a fair general

<sup>1</sup> The equation of the regression line is now  $y = 40.5 + .508x$ . In words, this says that an Order with an employment increase 10 per cent. greater than the average will tend to have an earnings increase 5 per cent. greater than the average. If one used this formula to "predict" the change in wages for an Order with a given change in employment, one would now be fairly near the mark in most cases—the worst exception being paper and printing, with an actual wage increase of 49.5 per cent. instead of a calculated one of 45.9 per cent.

<sup>2</sup> The results for Orders with more than 12 industries are:—

Food, drink and tobacco:	$r^2 = .04$
Textiles	$r^2 = .24$

It is also interesting to note that if we expand the "engineering" group to include vehicles  $r^2$  is still negligible (.058); and if we also include metal manufacture and metal goods to give one big "metal" group, 32 out of 38 industries show wage-increases between 40 per cent. and 50 per cent., and  $r^2$  is again negligible (.073).

The result is shown in Table II, in which the Orders have been arranged according to the size of their change in employment. On this basis there is, as was to be expected, a smaller spread of movements in employment, though it is still considerable. The greatest increase shown by a single Order is 18·7 per cent. (for vehicles), and the biggest fall is 17·2 per cent. (for leather etc.). Without these two extreme cases, the range is from +13·3 per cent. to -8·9 per cent. For *earnings* movements the spread is also somewhat reduced, but not very much: without the highest and lowest Orders the increases range from 48·6 per cent. to 34·1 per cent. which is not much less than we obtained for the individual industries, after cutting out ten at each extremity.

TABLE II

Industrial Order	Changes 1951-56 in number of males employed	Rise 1951-56 in Average Hourly Earnings of Men	
		% Deviation from Average Rise	Actual % Rise
Vehicles	+18·7	+12·0	47·0
Engineering, Shipbuilding, Electrical Goods	+13·3	+15·9	48·6
Paper and Printing	+10·8	+18·0	49·5
Chemicals etc.	+9·4	+4·4	43·8
Miscellaneous manufacturing	+7·8	+3·9	43·6
Metal Manufacture	+5·5	+9·4	45·9
Food, Drink and Tobacco	+5·1	+3·9	43·6
Precision instruments, Jewellery etc.	+4·8	+2·0	42·8
Bricks, China, Glass etc.	+3·6	-3·0	40·7
Miscellaneous metals	+2·8	+5·1	44·1
Wood and Cork	-7·1	-19·4	33·8
Clothing	-8·2	-15·6	35·4
Textiles	-8·9	-18·0	34·4
Leather etc.	-17·2	-18·7	34·1
Average	+2·87		41·9

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summary to say that within an Order the wage-movements are usually fairly similar, and that the association between wage-movements and employment movements is negligible.<sup>1</sup>

## IV

### INTERPRETATION OF THE RESULTS

Before attempting to give interpretation of all these results, one must start by re-emphasizing the point that they cannot possibly *prove* anything: the most that one can hope to do is to see what they *suggest*, and in particular to see whether the results are of the kind one would expect on various assumptions. Apart from anything else, there are too many different ways in which the things react, or may react, upon one another: a higher wage might be necessary to attract workers to an expanding industry, or it might simply reflect the fact that the union concerned has taken advantage of the increasing level of demand to negotiate a higher wage, even though enough workers would in fact have been forthcoming at the old wage in response to offers of employment. We cannot hope to establish that the wage increase was *necessary* to attract workers, we can only see what in fact *happened*. Similarly, we cannot be sure that the expanding industries attracted as many workers as they would have liked, but can only measure how many they did in fact attract.

With this general warning, it is perhaps helpful to consider two ways in which people might attempt to summarize the probable conclusions to be learnt. They are deliberately put in a slightly extreme form, in order to clarify the issue, but of course there is no reason why one should not believe that some element of what each says is really embodied in the true explanation.

The first way of presenting the conclusions, which might appeal to somebody starting from the ideas embodied in the Cohen Report, could be set out as follows:—

Within the individual industrial Orders, workers move freely from one industry to another, without needing any significant incentive in the way of differential wages. It is perhaps a little paradoxical to find that the expanding industries within the Order are as likely to show a wage increase below the average as they are to show one above the average, but the differences are usually not great, and this result might

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<sup>1</sup> The correlation in several Orders, including engineering, is weakly *negative*: this is the sort of result which chance factors would be likely to produce if there were no significant underlying tendency for the two variables to be associated within an Order.

perhaps be due to imperfections in the statistics or purely 'chance' causes. In particular, expanding industries often have to take a bigger proportion of learners or people in junior grades; this tends to lower the average earnings, even though the industry may be paying well to each grade.

When one comes, however, to a question of increasing the size of one industrial Order relatively to the size of others, the problem of movement is a much more substantial one, and the statistics suggest that it requires a significant change in relative wages to induce workers to move. On the whole, it is reassuring to find that these wage differentials do not have to be *very* large: an Order which expanded its employment by 10 per cent. more than the average (a substantial change) only raised its relative wage by some 3½ per cent.<sup>1</sup> But our original view that wage flexibility of this kind was important is supported by the statistics for the 14 Orders.

A second view, which would perhaps appeal more naturally to somebody starting from the ideas embodied in the "alternative hypothesis" might be set out as follows:—

The figures for the industries within the various Orders show that it is possible for industries to expand very substantially without any change in relative wages. This seems to be a clear illustration of the power of 'job opportunities' to secure changes in the distribution of labour, without having to invoke the aid of changes in relative wages. The fact that in some Orders the expanding industries had the smaller wage increase is particularly suggestive on this point.

The high correlation between wage increases and employment increases for the 14 Orders might at first sight suggest that this was necessary to enable the expanding industries to secure additional workers. An alternative possibility, however, is simply that the more employers in an Order wanted to expand, the more the union(s) concerned insisted on higher wages, even though the workers might have been attracted without the increase in wages. This also explains the position at the bottom end, since a contracting industry is commonly one in which the ordinary processes of collective bargaining would lead to smaller wage increases than elsewhere. One cannot say that cuts in relative wages in the contracting Orders were *necessary* to get rid of the workers, since the employers could always reduce their labour force by non-replacement or dismissals. This is not to deny that the movement of relative wages may have *helped* somewhat to secure the change in the distribution of labour, with less need for expanding industries to have continuous active recruiting campaigns; but the experience within the individual Orders suggests that probably the only thing really *needed* was a good supply of job opportunities at a wage regarded as 'acceptable' according to conventions which are more social than economic.

In part the difference between the two positions is one of words rather than of substance, but there are some points of real importance to be made.

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<sup>1</sup> As a percentage of 1951, earnings in 1956 would be: "average" Order 144 per cent., "expanding" Order 149 per cent.—a change in relative wages of about 3½ per cent.

First, the imaginary "Cohen" view is trying to gloss over much too easily the striking difference between the results *within* an Order and *between* Orders. In many cases, perhaps most, it is just not true that movement from one industry to another within an Order is easy; in many cases there is only a very broad similarity in the type of work, and the industries are in quite different locations. Indeed, there is no real presumption that the expanding industries within the food, drink and tobacco Order, for example, recruited many workers from the contracting ones: each expanding firm simply drew on the general pool of labour in its district, whilst the contracting ones largely allowed wastage to operate. Thus, the two industries with the biggest expansion of employment are chocolate and sugar confectionery (+39 per cent.) and biscuits (+36 per cent.); the two biggest contractions are bread etc. baking (-11 per cent.) and tobacco (-9 per cent.). Doubtless the biscuit industry recruited some displaced bread-bakers but there does not seem to be much other scope for simple movement, and the biscuit industry is much more highly localized.<sup>1</sup> The earnings-increases were all much the same, except that tobacco showed a significantly *higher* one than any other industry in the Order. There is clearly some force which produced the big changes in the distribution of labour, and there seems no reason to look beyond the "obvious" one, which we have christened job opportunities. Nobody need *regret* the fact that substantial changes in the distribution of labour can be secured in response to changing demands without the need for "corresponding" changes in the wage-pattern, which would be hard to secure.

What, then, of the very high correlation at the "Order" level between movements in employment and in earnings? Is the "alternative explanation" entitled to dismiss this as something which was likely to emerge from the process of wage bargaining, but which had little or no effect in helping to secure the redistribution of the labour force? And if so, ought not the imaginary proponent also to explain why the process of wage bargaining did not produce the same sort of result within the Orders?

It is easiest to take the second question first. If one follows the idea that wage bargains are largely determined by "social" and "conventional" considerations, then it is not difficult to

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<sup>1</sup> Similarly, in the engineering Order there is no "easy" transfer from the declining textile machinery industry to the expanding radio and television; in vehicles, the expanding aircraft industry would not draw on the contracting locomotive manufacture; and so on.

understand why the various industries within an Order tend to have much the same wage increase, despite the differences in both their character and their fortune. In some cases there is really only a single bargain covering the whole of an Order, or virtually the whole (e.g., engineering). In others, it is regarded as almost axiomatic that the wage increases should be made closely similar to those in some broadly related industry (which will commonly be in the same Order, e.g., some other branch of the food industries), even though the labour forces overlap only to a modest extent if at all, and the fortunes of that industry are moving differently. "Customary differentials" (or perhaps we should say "customary relativities, including equalities") are likely to be particularly strong within an Order—though there is of course still *some* scope for variations in the wage-movement, particularly for the wages actually paid.

As between Orders, the force of these customary relativities is weaker—though it clearly still exists, and the boundary of the statistical Order is not necessarily the crucial point at which the pattern can most easily be distorted. The people who stress the social and conventional factors in wage bargaining would not perhaps *expect* a high correlation between movements in employment and in wages at the "Order" level;<sup>1</sup> but this result would not be particularly *surprising* to them, so long as one adds that the differences in the wage-movement are not very *big*. In a period of full employment, it is quite understandable that the economic forces of changing demand should have a modest, systematic effect on the wage-bargain—and perhaps rather more effect on the wages actually paid—even though the social and conventional factors prevent any real "flexibility" in relative wages from being established.

This leaves the crucial question of the contribution of the wage-changes to securing the redistribution of labour between Orders. The answer seems to me to be essentially a matter of personal judgement. There can be no doubt that the changes in the wage-pattern between Orders, though not very substantial, would be operating in the right direction to help secure a redistribution of the labour force. How important they were, and how easily (if at all) the redistribution could have been secured without them, is a matter which cannot be answered by statistics. For my own part, I am inclined to think that their rôle was probably a fairly small one, essentially because the

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<sup>1</sup> Indeed, various previous researches have shown that groups of industries which are expanding their labour force did *not* have particularly big wage increases, but sometimes tended to have one which was below the average.

basic units which expand their employment are *not* "Orders", but rather "industries" or more strictly "firms". It seems fairly clear that, where the wage-change was much the same (e.g., within Orders), the pattern of the labour force could nevertheless be greatly changed; hence it also seems plausible that substantial changes could have occurred as between industries in different Orders, if the wage-change had in fact been much the same there also. In a sense, the "Order" is little more than a convenient statistical abstraction, so far as this problem of redistribution is concerned.

The above view can be only tentative, in the sense that it cannot be proved, and it must not be taken as implying any *objection* to the sort of wage-changes which have occurred as between Orders. If one wants to secure a redistribution of the labour force, then obviously it is all to the good if the force of "wage attraction" is on the whole pulling in the right directions. The most one can conclude is that it is probably not worth while to undertake a difficult campaign to induce wage-negotiators to change their practices, when redistribution seems to be obtainable without such a campaign, largely via the (socially more acceptable) route of varying job opportunities.

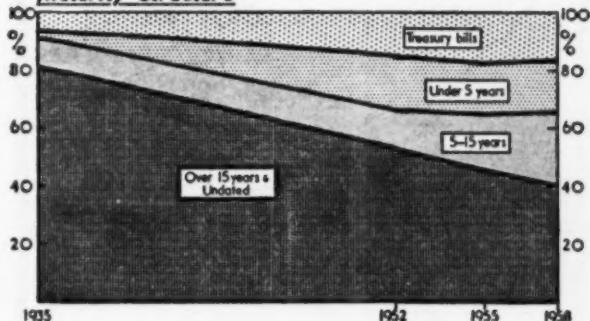
Perhaps one may conclude by reverting to the point made towards the end of Section I. A campaign to secure wage flexibility on the Cohen lines means attacking inhibitions against "absurd" wage-increases where labour is short, just as much as inhibitions against "unfair" wage-cuts where labour is in over-supply. If the campaign is to find its logical justification in the need to secure desirable changes in the distribution of labour, it is the *first* of these which provides the really strong case, and it is at least possible that that half of the campaign would be considerably more successful than the other. Does the prospective gain from a better system for redistributing labour justify the risk of aggravating the rise in prices? Since the one thing which is certain is that very substantial changes in the distribution of labour have been secured (with relatively small changes in relative wages) with the existing system of wage-fixing, that is the crucial question to ask before embarking on a campaign to alter the system.

W. B. Reddaway.

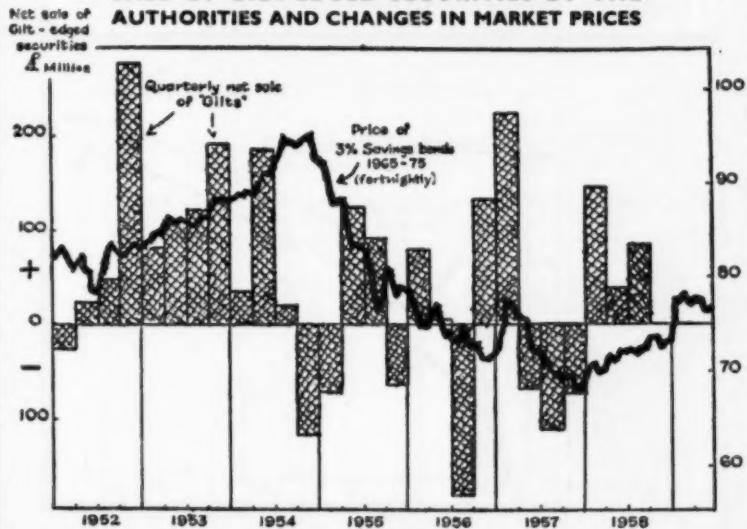
*Department of Applied Economics,  
Cambridge.  
September, 1959.*

## GILT-EDGED

### Maturity Structure

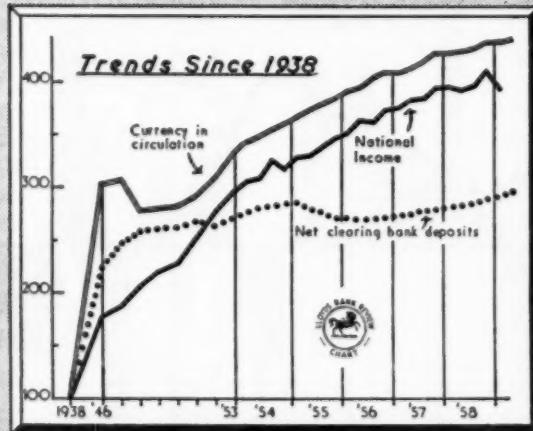
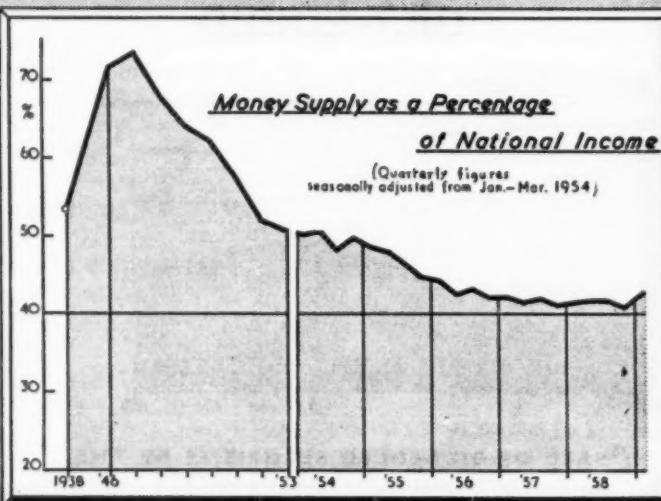


### SALE OF GILT-EDGED SECURITIES BY THE AUTHORITIES AND CHANGES IN MARKET PRICES



The top chart—both are derived from the Radcliffe Report—brings out the shortening in the life of the national debt. Since 1935, the proportion with a life of 15 years or over has fallen from 80 to 40 per cent.; by contrast, over one-third of the debt is now for five years or less, compared with less than one-tenth in 1935. The second chart shows that the authorities did manage to sell large amounts of gilt-edged—apparently some £1,300 millions—over a period of 6½ years in which prices declined on balance. Most sales took place, however, at times when prices were rising.

## MONEY SUPPLY

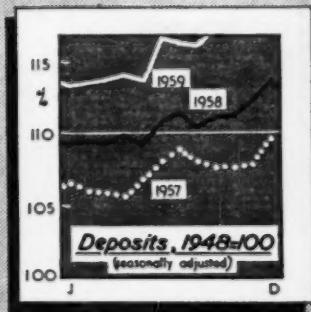
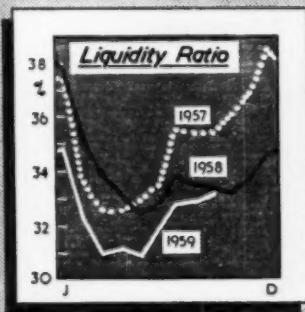
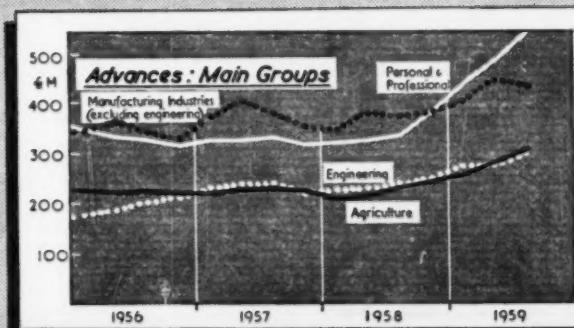
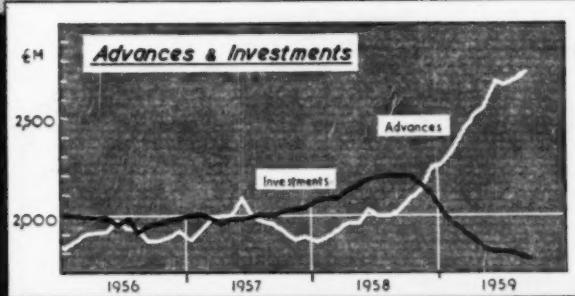


Sources: National Income Blue Books  
Monthly Digest of Statistics

Notes (1) Money supply: clearing bank net deposits plus  
Currency in circulation.  
(2) National income: gross domestic product at  
factor cost.

Allowing for seasonal factors, money supply as a ratio of national income appears to have fallen until 1957, since when there has been relatively little movement. Since 1953, the trend of the currency circulation has kept almost exactly in step with that of the national income.

## BANKING

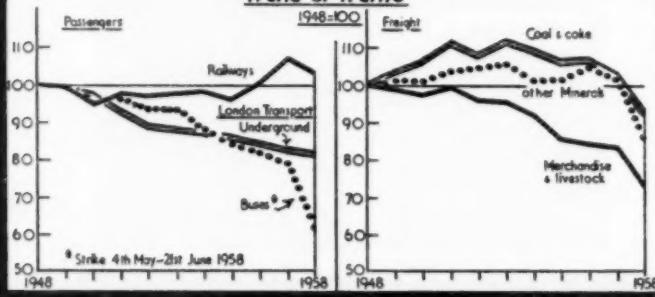


SOURCES: Committee of London Clearing Banks.  
British Bankers' Association

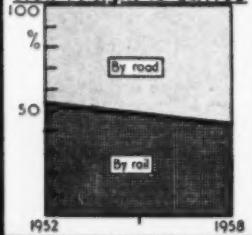
Clearing bank advances have risen appreciably on balance since last summer and in October were £810 m. (or 41 per cent.) higher than in August 1958; investments, in contrast, had been reduced by £470 m. over the same period. At the same time, until October the banks' liquidity ratio has been running below last year's level.

# RAILWAYS

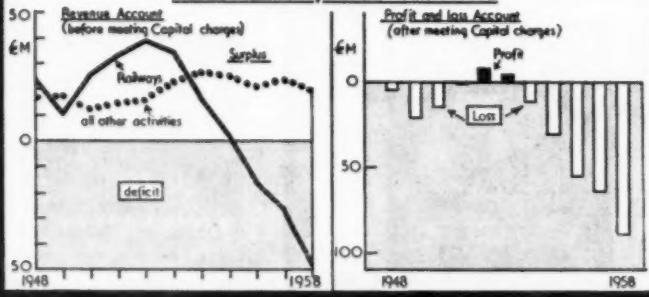
## Trend of Traffic



## How Freight is Carried



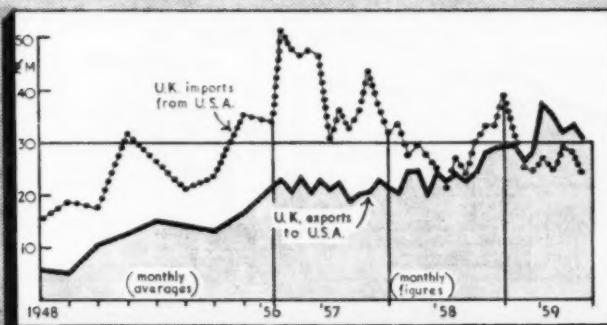
## British Transport Commission



SOURCES: British Transport Commission Reports,  
"Transport of Goods by Road"

In the Transport Commission's re-appraisal last July of the railway modernization plan it is estimated that by 1963 gross receipts should more than cover working expenses, leaving "a substantial" working surplus, put at £50-£100m. However, after meeting capital charges, the profit and loss account may still be only just on the right side.

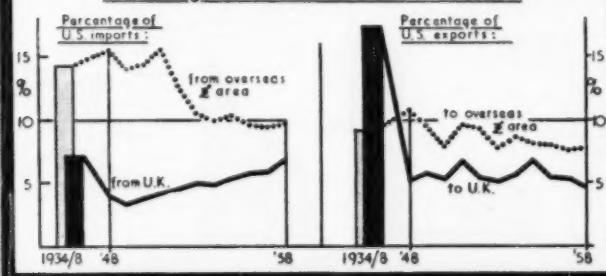
## ANGLO-AMERICAN TRADE



### Leading Items of Trade 1958



### Sterling Area Share of U.S. Trade



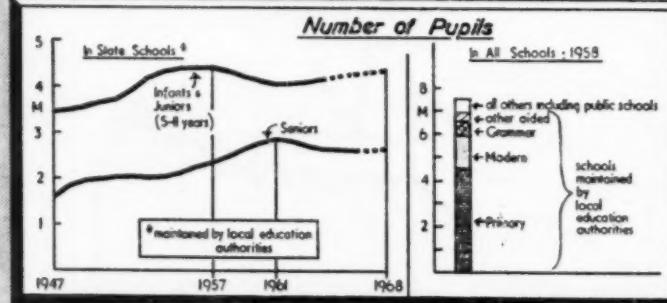
Sources: Trade & Navigation Accounts  
Report on Overseas Trade

America is now the largest single market for British exports, taking over 10 per cent. of our shipments abroad. Moreover, for the first time in nearly a century, our exports to the U.S. now exceed our imports from the U.S.

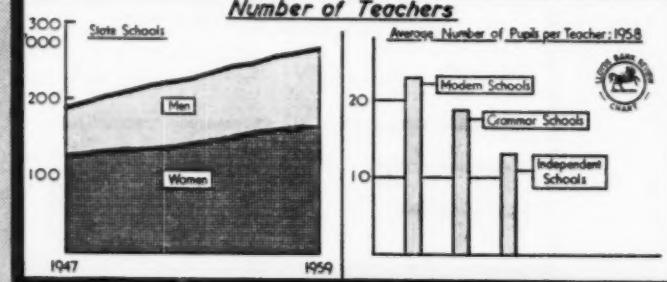
# EDUCATION

*England & Wales*

## Number of Pupils

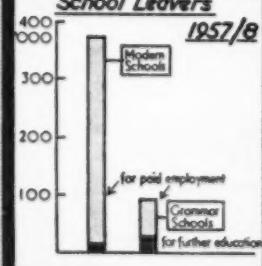


## Number of Teachers

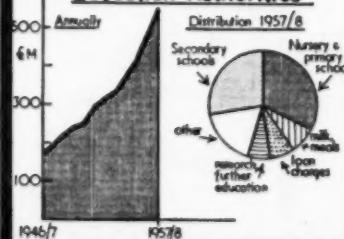


## School Leavers

1957/8



## Spent on Education by Local Education Authorities



SOURCE : Ministry of Education Reports

Over the last fifteen years school places have been provided for nearly two million extra children. Expenditure in 1957/8 was well over three times the level of 1946/7.

## EARNING OUR KEEP



## THE CITY

**B**RITAIN earns foreign exchange not only by selling goods abroad, but also by providing services — part of our "invisible exports". The contribution of the City of London in this respect, through commissions and premiums earned overseas by insurance companies, bankers, brokers and merchants, has been put at between £125-£150 millions a year — enough to pay, for example, for all our imports of dairy products.

This is an impressive measure of the immediate worth of the City to Britain's economy. Perhaps of greater value is the indirect benefit which our exporters and other traders derive from the City's position as a world financial and trading centre.

More than 350,000 people pour into the City every day to work in the offices of the 20,000 firms, companies and other institutions within its boundaries. A great many of them depend on the expert services of

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